

Louisiana Department of Wildlife and Fisheries

2003-2004 Annual Report



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The charge of the Louisiana Department of Wildlife and Fisheries is to protect, conserve and replenish the natural resources, wildlife and aquatic life of the state.

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Kathleen Blanco, Governor

Wildlife and Fisheries Commission

Bill A. Busbice, Chairman

Terry D. Denmon

Lee Felterman

Billy Broussard

Henry Mouton

Wayne Sagrera

Jerry Stone, M.D.



Janice Lansing, Undersecretary
Phil Bowman, Assistant Secretary
John Roussel, Assistant Secretary

Dwight Landreneau, Secretary

Division Administrators

Bennie Fontenot, Inland Fisheries

Karen Foote, Marine Fisheries

Tommy Prickett, Wildlife

Brandt Savoie, Fur & Refuge

Col. Winton Vidrine, Enforcement

ENFORCEMENT

Louisiana Department of Wildlife and Fisheries wildlife enforcement agents issued more than 16,000 citations and over 5,000 written warnings during this fiscal year for offenses including violations of Wildlife and Fisheries Commission regulations, state and federal wildlife and fisheries laws and boating safety regulations. In addition, wildlife agents worked with other law enforcement agencies in the interest of public safety in the Enforcement Division's role as the state's lead search and rescue agency.

In keeping with division policy, special emphasis was placed on enforcement of deer and waterfowl regulations and all aspects of boating safety including boating under the influence (BUI) patrols on our waterways. Over 30,000 man-hours were devoted to patrolling for deer hunting violations. 26,563 hours were dedicated to waterfowl enforcement. Boating accident investigations consumed 4,006 and 121,079 hours were dedicated to boating safety enforcement, including actual patrol hours and additional hours devoted to report writing, administrative activity and court testimony. Commercial fresh and saltwater fishing enforcement hours totaled 32,024.

The Wildlife and Fisheries Law Enforcement Academy maintained its high standards and is Peace Officers Standards and Training (POST) Council certified. Due to the level of professionalism and preparedness offered by the academy, it is generally recognized as one of the best of its kind in the nation. Following successful completion of the Basic Training Academy, selected officers are organized into special force units. Each is dedicated to a particular enforcement mission.

Boating Law Enforcement

In fiscal year 2003-2004, the Enforcement Division combined traditional law enforcement with proactive boating education. Boating education classes were designed to teach safety and responsibility on the water. 4,894 Louisiana citizens completed 200 National Association of State Boating Law Administrators approved boating safety classes taught by wildlife enforcement agents and trained volunteers. Act 921 of the 2003 Regular Session of the Louisiana Legislature required mandatory boater education for anyone born after January 1, 1988. The new law is generating greater participation in safety courses.

Enforcement of boating regulations remained a priority and 5,243 boating violation citations were issued during fiscal year 2003-04. Emphasis remained on the alcohol-impaired boat operator. BUI detection continued to improve. In addition to enforcing BUI laws, wildlife enforcement agents strictly enforced careless and reckless operation statutes, concentrating on the increasing number of personal watercraft.

Search and rescue operations saved lives and minimized human suffering for accident victims, stranded boaters, lost hunters and anyone in need of rapid response assistance. Agents are currently working to improve communications and reduce response time to areas of operation.

Training Program

Cadets receive a minimum of 25 weeks of training. The Wildlife and Fisheries Law Enforcement Academy graduated 30 new officers in 2003-2004. The training facility is located on LDWF property on Flannery Road in Baton Rouge. Classroom and lodging facilities are provided for both cadets and in-service officers returning for additional training in a much-improved learning environment.

All wildlife enforcement agents are certified in 10 courses of training conducted by experts from various agencies: standardized field sobriety testing (LDWF), chemical testing for insobriety (State Police), DWI detection (Highway Safety Division), Louisiana safe driver's course (Department of Public Safety), basic marine theft, basic defensive tactics and collapsible baton techniques (LDWF), wildlife agents aquatic survival (LDWF), and Chemical Weapon Indoctrination and Certification (LDWF).

The division makes advanced training available to selected officers in such areas as drug identification in the field, marine theft, boating accident investigation, and diving/underwater law enforcement. Supervisory personnel attended advanced supervision and management training.

Special Force Units

The Oyster Strike Force (established in 1990) and Salt Water Enforcement Patrol (SWEP, established in 1983) continued to successfully enforce oyster and saltwater fishing regulations. These units work with the division's three aircraft pilots and planes to monitor commercial and recreational fishing activity along Louisiana's extensive coastline. SWEP officers were also involved in several search and rescue operations.

There are two special investigative units; Special Operations (covert) and Special Investigations (overt/uniformed). Their primary mission is detection of illegal activity in the commercial seafood industry. Illegal commercialization, under-reporting and false reporting of fishery information, smuggling and violations involving interstate commerce continue to plague legal commercial fishery operations.

The Enforcement Division entered into another Joint Enforcement Agreement (JEA) with National Oceanic and Atmospheric Administrations Office for Enforcement. The 2003/2004 agreement for \$1.5 million had a positive economic impact of almost \$6 million while supporting compliance with regulations designed to better manage the fishery regulations in the Gulf of Mexico and Louisiana.

Members of the Wildlife Enforcement Dive Team (created in 1990) are Dive Master Certified. In addition, all dive team members and dive tenders have completed a Rapid Deployment Search and Rescue/Recovery Program. The divers have acquired dry suits and underwater communications gear, greatly increasing their effectiveness in underwater recovery operations.

The State Strike Force consists of 10 wildlife enforcement agents and is designed to provide immediate, additional manpower whenever and wherever needed.

Louisiana Operation Game Thief, Inc. (OGT), a program providing cash rewards to anyone reporting information resulting in the arrests of wildlife violators, recorded more than 2,000 calls to its 24-hour, toll free number. In fiscal year 2003-2004, OGT paid \$18,600 in cash rewards to individuals who reported outdoor outlaws. This anti-poaching organization celebrated its 20-year anniversary in 2004 and has now paid in excess of \$190,000 in rewards since July of 1984.

The Enforcement Division is a very active participant in Louisiana's Homeland Security Plan and represents the state in waterborne emergencies. Through the Office of Emergency Preparedness (OEP) the Enforcement Division is tasked with response in search and rescue operations, natural disasters and, most recently, maritime security of Louisiana's vital business and government interest along major rivers and the coast. As members of the Governor's Homeland Security Advisory Council, the Area Maritime Security Executive Steering Committee and all major port security committees within the state, our enforcement agents respond frequently to requests for our marine resources to be deployed for security concerns. Our ability to operate throughout the state's vast maze of waterways with specialized training and equipment has complimented Louisiana's ability to respond emergencies on the water and in rural areas.

LOUISIANA SEAFOOD PROMOTION & MARKETING BOARD

The Louisiana Seafood Promotion and Marketing Board was created by the 1984 Louisiana Legislature to enhance the economic stability of the seafood industry while supporting wise management of the state's fishery resources.

During fiscal year 2003-2004, the overall economic infrastructure of the seafood industry continued to reinvent itself to meet the demands of an emerging global marketplace. The Louisiana Seafood Promotion and Marketing Board (LSPMB) closely aligned itself with these struggles.

LSPMB partnered to develop several remarkable programs.

Gulf Coast Seafood Pavilion

LSPMB partnered with the prestigious Louisiana Restaurant Association (LRA) and Southwest Airlines to launch the first ever trade event to feature domestic seafood exclusively.

Fifty exhibit sites were created within the already enormously successful LRA Food Service Expo in New Orleans. There was a 95 percent sell out and based on the exhibitors' survey, American seafood suppliers are very interested in returning in 2005.

Great American Seafood Cook Off

LSPMB created a contest of distinguished chefs from coast to coast to raise awareness of the superior quality of American seafood. Bill Hogarth, director of NOAA Fisheries (sponsor of the event), presented the first place trophy to Executive Chef John Besh of Restaurant August in New Orleans.

The New Orleans event drew national publicity with two television crews from the Food Network, Fox Network, Seafood Business Magazine, and others producing stories.

WGNO 2004 Sugarbowl Countdown

The Countdown sponsored by the Louisiana Seafood Board was awarded the Sports Emmy for outstanding achievement in regional sports television coverage.

The three-hour, live, pre-game show featured interviews with coaches and team members. And the Seafood Board, the title sponsor, hosted a rousing raw oyster eating contest that pit LSU fans against Oklahoma fans.

The Countdown garnered the station's highest local rating ever for viewership. The Sports Emmy Awards are one in the family of Emmy's hosted by the The National Television Academy. Acme World Oyster Eating Contest. Now, in its fourth year, the famous oyster eating contest draws sports eaters from across the country. Sweet Sonya Thomas, the 2004 champ, slid 36 dozen ice cold Louisiana oysters down her throat in ten minutes.

The New Orleans event has hoisted Louisiana oysters to historical levels of visibility. The oyster-eating champs have appeared on the David Letterman Show, Jay Leno Show, The View and others. Wild American Shrimp, Inc. Louisiana and other producers of Gulf of Mexico shrimp have incorporated and hired and an Atlanta marketing firm to distinguish Gulf shrimp from imports: to identify them as the wild, tender, sweet, premium quality product that they've always been.

Bonne Crevette

Bonne crevette means good shrimp. It's a new grassroots campaign that promotes Louisiana shrimp by giving it a French bayou identity and a special season. Now, every summer is shrimp season and LSPMB will roll out new waves of the promotion. Louisiana shrimp are bonne crevette.

Shrimp Certification Program

WASI supporters are also working with LSU Agricultural Center's Office of Food Science to develop a quality assurance program. The objective is to establish scientific standards whereby Gulf shrimp can distinguish themselves, carry a certification stamp, and command the best market price possible.

Oyster Education Day

LSPMB and the Louisiana Oyster Task Force hosted a briefing on the Louisiana oyster industry and a step by step tour from oyster lugger to restaurant table on how oystering works. The guests of honor were members of the senate and house Natural Resource Committees. LDWF marine fisheries biologists provided interpretive comments on the history and status of Louisiana's oyster fishery.

Trade Shows

- Food & Beverage Show, Vegas
- International Boston Seafood Show
- International Hotel-Restaurant Show, New York
- Louisiana Restaurant Association, New Orleans
- National Restaurant Association, Chicago

Sponsorships & Partnerships

- Crescent City Farmers Market
- Gulf Oyster Industry Council
- Louisiana Dept. of Culture Recreation & Tourism/Office of Tourism
- Louisiana Public Broadcasting and National Educational Television Authority.
- LSU Ag Center/Food Science
- McIlhenny Company, makers of TABASCO pepper sauce
- National Fisheries Institute
- WDSU-TV
- Wild American Shrimp, Inc.

Advertising Contracts

The Advertising Campaign delivered 67,104,001 impressions.

- City Business Magazine
- Coastal Broadcast Acadiana
- Gambit Newspaper
- Lamar Billboards
- Louisiana Cookin Magazine
- Louisiana Life Magazine
- Louisiana Network Radio, statewide
- New Orleans Gourmet Magazine
- New Orleans Magazine
- Seafax Magazine
- Seafood Business Magazine
- WWL am Radio.
- WWL-TV

Editorial Features

LSPMB produced and distributed news features and radio announcements providing information and educational tips about Louisiana seafood. These were printed across the country to a readership of 44,934,812 and broadcast to a listenership of 34,899,340.

Education Program

The board's education program provided a documentary and study units to the WLPB-TV Educational Services, Louisiana Folklife Program, Louisiana Science Teachers Association and others.

The board's interpretive installations continue to be enjoyed by thousands at the Audubon Zoological Gardens, the Terrebonne Water Life Museum in Houma, and the Marine Fisheries Museum in Lafitte.

PUBLIC INFORMATION

The Public Information Section manages internal and external communications, media and public relations events and other specialized activities for the Department of Wildlife and Fisheries. These responsibilities are accomplished through four units: News and Media Relations, *Louisiana Conservationist* magazine, Audio-Visual Productions, and Resource Library. The section consists of eight employees responsible for the production and distribution of the department's printed materials, ongoing media relations, public resource centers and all audio-visual projects. Special promotions and events are also coordinated through the Public Information Section.

News and Media Relations

The News and Media Relations Unit manages the production and distribution of all regulation pamphlets, news articles, department newsletter and various other publications such as the department's annual report. This unit also serves as the first point of contact for media inquiries, press conferences and specialized promotional events.

News Service

During fiscal year 2003-2004 the LDWF News Service provided 394 news releases and three news features to approximately 200 media outlets. The department's newsletter was published on a biweekly schedule, distributing 26 issues to approximately 1,100 fish and wildlife related businesses. News articles were distributed weekly through electronic mail and newsletters were distributed in print format. These news documents are on file in the Public Information Section main office.

News Service holds the responsibility of producing and distributing all fishing, hunting and trapping regulations pamphlets and the annual report. All pre-press work, printing approvals and final distribution arrangements are handled by the News Service. Requests from the general public for regulations pamphlets are fulfilled through the LDWF Library. The following regulations pamphlets were distributed during last fiscal year:

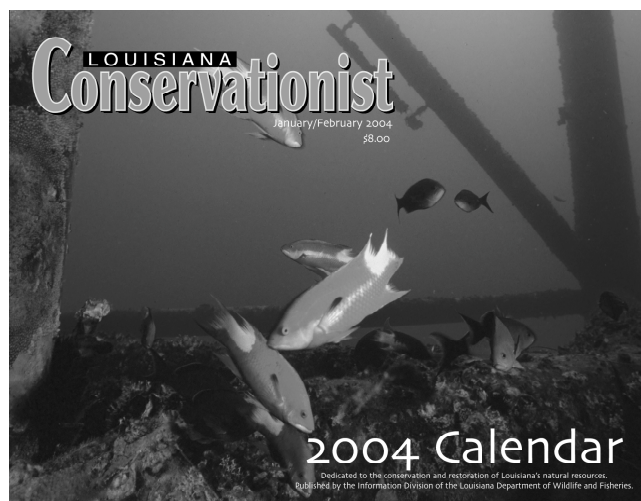
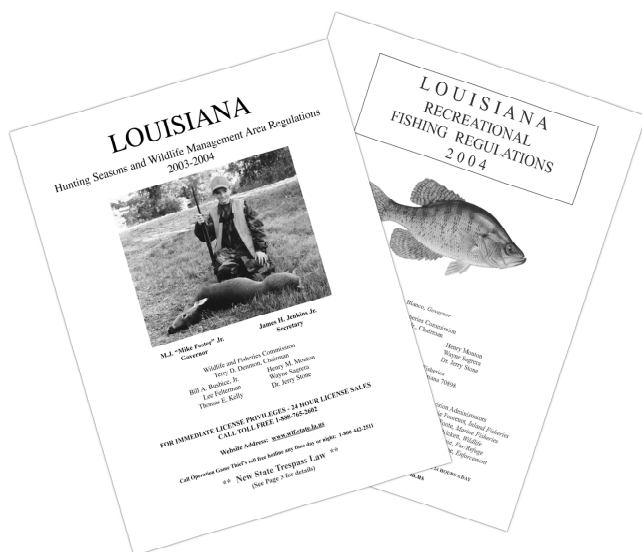
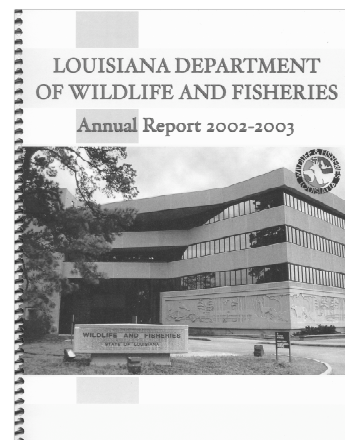
- *Louisiana Recreational Fishing Regulations 2004* (300,000)
- *2004 Commercial Fishing Regulations* (23,500)
- *Louisiana Hunting Seasons and Wildlife Management Area Regulations 2003-2004* (300,000)
- *Louisiana Migratory Game Bird Hunting Regulations 2003-2004* (225,000)
- *Louisiana Trapping Regulations 2003-2004* (11,400)
- *Louisiana Turkey Hunting Regulations 2004* (60,000)
- *Annual Report 2002-2003* (250)

News Service reports on the monthly Louisiana Wildlife and Fisheries Commission meetings with news releases during the weeks prior to the meetings and with post commission news packages.

Media Relations

This unit coordinates and facilitates media contacts for department personnel, including press conferences, interviews, special appearances, editorial responses and specialize information campaigns. During 2003-2004 this unit received an average of five media inquiries per week, requesting general department information, photographs and digital images. Six media events with statewide television and print coverage were initiated by Media Relations. These events consisted of coordinating interviews, distributing video news releases (VNR) and talk show appearances. The following topics were covered:

- Louisiana Sportsman's Paradise Expo (local television coverage)
- National Hunting and Fishing Day (local television coverage)
- Black Bear Relocation (national television coverage)



- Derelict Crab Trap Removal Program (local television coverage)
- Public Meetings

Statewide public meetings for the 2004-2005 hunting seasons were held again during this fiscal year. The Media Relations and Audio-visual units, and the Wildlife Division coordinated the meetings in Alexandria, Lake Charles, Lafayette, Ponchatoula, Ruston, Minden and Winnsboro.

Louisiana Conservationist Magazine

The *Louisiana Conservationist* magazine maintained its regular publishing schedule of six issues per year including the calendar, at the beginning of fiscal year 2003-2004.

The *Louisiana Conservationist* magazine continues to promote its status as the state's oldest outdoor magazine with its first publication in 1923. The 36-page, full-color magazine is primarily subscriber-funded with additional revenue from the sales of LDWF maps, posters, books and other department developed publications. The magazine's circulation fluctuated between 22,000 and 23,000 during the past fiscal year.

The magazine staff assisted the Natural Heritage Section, Fur and Refuge Division, with the development of a brochure for the Safe Harbor program. A full color brochure titled "Red Cockaded Woodpecker Safe Harbor Program" was designed and produced by the magazine staff. Funding was provided by the Natural Heritage Section.

Audio/Visual Productions

The Audio/Visual Unit is responsible for the department's audio and video productions, video news releases (VNR), various meeting recordings and other specialized A/V requests.

Two video news releases were created this year through the A/V unit and distributed statewide to 15 major television stations. The topics covered in the VNRs were Derelict Crab Trap Removal program and the Nuisance Black Bear program. Several days of field footage were taken during the year for archival use, media requests and various department uses. The largest project during this time was the Joint Enforcement agreement video. This 15-minute video was created to educate law-makers about the program and as a means for securing federal funding and support.

Other video projects included a commencement video for the graduating Enforcement Cadet class. This video chronicled the entire enforcement training process and is planned to be used as an orientation tool for incoming cadets. Also two section report videos were produced to be shown before the Commission at the monthly Commission Meetings.

The A/V unit is also responsible for officially recording the monthly Wildlife and Fisheries Commission meetings. These recordings can be obtained at LDWF through the Office of Wildlife.

During the 2003 Employee Recognition Awards Program, two Public Information staff members, Joel Courtney and Thomas

Gresham, were recognized in the category "Special Achievement By a Team" for an outstanding job performance with the *2003 Sunset Video*.

Information and Resource Library

The Information and Resource Library is open for public access during normal work hours. Available materials include various natural resource related publications, *Louisiana Conservationist*, wildlife management area maps, historic books and documents, regulations pamphlets and a selection of VHS videos available for loan.

The total number of information requests received for fiscal year 2003-2004 was 5,599. The breakdown by source was as follows:

- E-mail 774
- U.S. Mail 113
- Phone 621
- Walk-in 4091

Receptionist Desk

The reception desk at LDWF's headquarters is operated and maintained through the library. All visitor inquiries and phone calls are cataloged by month. The total number of inquiries for 2003-2004 were 14,097 walk-ins and 6,975 phone calls.

Special Promotions/Activities

The Public Information Section is responsible for organizing and executing public relations events for the department. These events are the responsibility of all four units with each contributing their expertise.

Louisiana Sportsman's Outdoor Expo - August 30-31, 2003. This was a new outdoor show for south Louisiana coordinated by WVLA - NBC 33 in Baton Rouge. LDWF was asked to participate as a sponsor by means of exhibits and advice. Public Information coordinated the event and each division and several OMF sections exhibited at the expo, utilizing 40 employees during the two day event. According to expo coordinators, more than 27,000 people attended the expo and LDWF exhibits were the largest and most popular with favorable comments from all ages.

Louisiana's National Hunting and Fishing Day Celebration/Baton Rouge - Sept. 27, 2003. This event is sponsored by LDWF in four locations across the state. The Public Information Section is responsible for organizing and executing the Baton Rouge celebration. This annual event offers a full day of outdoor activities for the public, free of charge. This was the 19th year for Baton Rouge and attracted approximately 1,800 attendees.

FISCAL

The Fiscal Section is staffed by 13 employees, and is responsible for all financial operations of the department. The main goal of the Fiscal Section is to achieve compliance with all applicable laws, rules, policies, and regulations governing the activities managed. The staff develops and implements fiscal controls, provides advice, assistance, and training, and standardizes procedures. In addition to the units and functions described below, this section is also responsible for directing the department's strategic planning and performance measurement activities.

Budget/Expenditure Control/Federal Reporting

The duties of the Budget/Expenditure Control/Federal Reporting Unit include developing and compiling the department's annual budget request package, monitoring the expenditures of the department's seven appropriated programs, ensuring correct coding in the state's accounting system, preparing the department's annual financial report, and preparing quarterly and yearend federal financial reports on all grants

Contracts

During fiscal year 2003-2004, the Contracts Unit reviewed and processed 162 new professional service and consulting contracts and 334 contract payments. This employee is also responsible for all telecommunications functions for the department including payment of 180 monthly cellular phone bills, payment of the monthly line services through the State Office of Telecommunications, and handling all service and repair orders statewide. In this reporting period, there were 342 service/repairs orders processed. The duties related to liability insurance exposure reporting to the State Office of Risk Management are also assigned to this employee.

Accounts Payable

The section's Accounts Payable Unit processes payments to all vendors through the state's financial information system and payments to employees for travel and petty cash reimbursements through an in-house system. In fiscal year 2003-2004, a total of 18,170 checks were processed through these two systems. This unit also reviews, audits, and enters expenditure coding for all LaCarte (VISA) purchasing statements. In this fiscal period approximately 4,700 of these statements were received and processed.

Audit

The Audit Unit is responsible for collection of severance taxes on oysters and fur, issuance of fill material permits, and collection of fill material royalties and shrimp excise taxes established by law and owed to the department. The revenue from these sources amounted to \$973,745 in 2003-2004.

Revenue

The Revenue Unit receives, deposits, and classifies funds owed to the department from various sources. A total of \$31.6 million was processed by this unit in 2003-2004. The unit is also responsible for the functions related to the civil restitution program and collection of class one violation fines. In fiscal year

2003-2004, the unit issued 209 civil assessments for \$153,000 and received payments on 269 cases totaling \$78,000. During this period, the unit also received payments on 6,972 class one fines totaling \$425,250.

HUMAN RESOURCES

At Wildlife and Fisheries, our most valuable resource is our human resources, the people who direct all our other resources and get the work done on behalf of the Louisiana taxpayers, users and consumer of Louisiana's natural resources and products.

The authorized number of employees for LDWF for fiscal Year 2003-2004 was 792. Along with these employees, LDWF also employed about 81 students throughout the state.

Along with our active employees we also provide service and guidance to retirees, former employees, and their dependents.

One of the responsibilities of the Human Resource section is the comprehensive administration of our employees' personnel actions. See the appendix for a breakdown of the personnel actions for fiscal year 2003-2004.

The program areas that are responsibilities of Human Resources are: Human Resource Administration (policies and procedures, civil service rules, layoffs), EEO Compliance (ADA), Performance Appraisal, Training and Staff Development (CPTP, MST, agency sponsored training) Employee Relations (employee counseling, Employee Assistance Program, grievances, drug testing, Employee Recognition Program, Classification (Position Descriptions, Job Studies, Audits), Wage and Salary Administration, Recruitment Program, Selection and Placement, Benefits Program (health, life and miscellaneous insurance, retirement, workers compensation, leave management, unemployment, and FMLA), Operations (employee files, personnel actions, enrollment and exiting of employees) Payroll Administration (ISIS system), Safety, and Affirmative Action.

In an effort to enhance safety and productivity in the LDWF work force, we continue to work with employees and management to develop a safe and productive work conditions through several of our programs such as Safety, Planning and Performance Review and Training and Staff Development.

ADMINISTRATIVE SERVICES

The Administrative Services Section consists of Purchasing and General Services, whose mission is to provide support services for the Louisiana Department of Wildlife and Fisheries so that its mission of conservation of renewable natural resources is accomplished.

The administrative staff works closely with and supports other divisions. More specifically, they assist with agency term contracts and purchasing specific to LDWF, seafood promotions, alligator harvest, timber sales, and farm leases.

Purchasing

The Purchasing Unit consists of three purchasing professionals. This fiscal year we managed 127 contracts, 4,278 other types of purchases, in addition to 30 leases that were maintained, initiated or updated. Purchasing insures compliance with all state and department laws and regulations concerning procurement. Purchasing trains and serves as the help desk for all divisions in the statewide-computerized system called ISIS. The purchasing part of ISIS is called AGPS. The purchasing process continues to improve with the use of the purchasing card by making it easier for LDWF personnel to make and pay for purchases timely. It continues to save time by reducing the number of purchase orders having to be entered into the AGPS system and has eliminated some usage of petty cash. It has also saved employee time in dealing with vendors in the payment process. Paying via purchasing card has given LDWF a broader procurement base and allowed us to do business with a wider variety of vendors who normally do not use purchase orders.

The Purchasing Unit also handles the fleet fuel card for fuel purchases and vehicle repairs.

General Services

General Services, consisting of one permanent employee and two students, also supports all divisions of LDWF by operating the mail system, receiving all deliveries, and shipping all packages for the Baton Rouge office. Over 400,000 pieces of mail were processed this fiscal year. They are also responsible for duplicating and binding large numbers of documents as required by the divisions. Over two million copies were produced on the duplicating machine. General Services maintains the supply room. It is utilized for routine office supplies, envelopes, and paper to be distributed to the Baton Rouge office, district offices, and remote facilities. Maintaining a minimal inventory on standard office supplies and paper helps the department keep cost down by eliminating the need for each office to order their own standard supplies. Printing of different sizes and types of envelopes is also less expensive when ordered in quantity, thus reducing cost.

SOCIOECONOMIC RESEARCH AND DEVELOPMENT

The Socioeconomic Research and Development Section was established in 1992 within the Office of Management and Finance of the Louisiana Department of Wildlife and Fisheries. The duties and responsibilities of the Section are:

- To recommend, conduct, and coordinate economic research studies pertaining to wildlife and fisheries resources of Louisiana and the Gulf Region
- To present research findings at appropriate professional and scientific meetings and publish results in departmental publications and peer-reviewed scientific journals
- To provide information and support to other sections and divisions within the department, as well as agencies outside the department, to assist them in accomplishing their research needs, management tasks, and short and long-term objectives
- To represent the department and state in various study groups, on task forces, and on committees established to study, manage, and improve wildlife and fisheries resources at the local, state, regional and national levels
- To administer and implement special programs
- To perform other activities as directed by LDWF's appointed authorities.

Publications, reports, and presentations completed during fiscal year 2003-04 include:

Publications and Reports

Isaacs, Jack C., and David R. Lavergne. "Results of the 2002 Louisiana Department of Wildlife and Fisheries Customer Service Program's Media Survey." Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, July, 2003.

Icabalceta, Jorge. "The Charter Boat and Shrimp Industries of Louisiana: Environmental Perturbations Project Report." Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, September 2003.

Isaacs, Jack C., and David R. Lavergne. "Customer Service Assessment Report, 2003". Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, October, 2003.

Isaacs, Jack C., and David R. Lavergne. "Customer Service Plan and Customer Service Employee Action Plan, 2004." Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, October, 2003.

Isaacs, Jack C., Walter R. Keithly, and David R. Lavergne. "Final Report for Louisiana's Oyster Shell Recovery Pilot Project." (In completion of N.O.A.A. Award No. NA96FK0188). Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, March 29, 2004.

Isaacs, Jack C., and David R. Lavergne. "The Results of the 2004 Vendor's Survey." Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, April 1, 2004.

Isaacs, Jack C., and David R. Lavergne. "The Human Resources Section Survey: An Assessment." Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, April, 2004.

Icabalceta, Jorge. "Assessing the Louisiana Shrimp Fishing Fleet Technical Efficiency Using A Bayesian Stochastic Cost Frontier Model." Revision of a working paper submitted for publication, April 29, 2004.

Icabalceta, Jorge. "Estimating the Number of Active Lifetime Fishing and Hunting Licenses in Louisiana." Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, May 24, 2004.

Icabalceta, Jorge. "Louisiana GIS Data Inventory." Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, May 24, 2004.

Icabalceta, Jorge. "Departmental Geographic Information Systems: Status Assessment Survey." Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, May 26, 2004.

Icabalceta, Jorge. "LDWF Language Assistance Plan." Louisiana Department of Wildlife and Fisheries, Baton Rouge, Louisiana, June 28, 2004.

Presentations

Holloway, Herb. "Where are they now? Participation decisions of displaced Louisiana gill-netters and implications for multi-fishery management strategies." Oral presentation at the 133rd Annual Meeting of the American Fisheries Society, Quebec City, Quebec, Canada, August 10-14, 2003.

Chi, Yeong-Nain, et al. "Modeling Wildlife Watching Consumption: A Double Hurdle Approach." Oral presentation at the 73rd Annual Conference of the Southern Economic Association, San Antonio, Texas, November 21-23, 2003.

Chi, Yeong-Nain, et al. "An Analysis of Participation in Bird Watching in the United States." Oral presentation at the Fourth Social Aspects and Recreation Research (SARR) Symposium, San Francisco, California, February 4-6, 2004.

Holloway, Herb. "Participation patterns of Louisiana resident recreational anglers: habit or logical choice?" Oral presentation at the 2004 Spring Meeting of the Southern Division of the American Fisheries Society, Oklahoma City, Oklahoma, February 26-29, 2004.

Isaacs, Jack C. "The Louisiana Department of Wildlife and Fisheries Customer Service Program." Training session presented at the Louisiana Department of Wildlife and Fisheries' Statewide Training Program, March 16, 18, 23, 25, 2004.

Icabalceta, Jorge and Patrick Banks. "LDWF GIS Overview and Inventory." Oral presentation at the Louisiana Geographic

Information Systems Council (LGISC) meeting. Baton Rouge, Louisiana, May 20, 2004.

Chi, Yeong Nain and Jack C. Isaacs. "An Empirical Analysis of Louisiana Anglers' Motivations for Fishing." Poster presented at a conference entitled: Challenges of Socioeconomic Research in Coastal Systems: Valuation, Analysis, and Policy. Center for Natural Resource Economics & Policy (CNREP), Louisiana State University Agricultural Center, Baton Rouge, Louisiana, May 27-28, 2004.

Holloway, Herb. "Structural Changes in Louisiana's Commercial Shrimping Industry: 1989-2003." Poster presented at a conference entitled: Challenges of Socioeconomic Research in Coastal Systems: Valuation, Analysis, and Policy. Center for Natural Resource Economics & Policy (CNREP), Louisiana State University Agricultural Center, Baton Rouge, Louisiana, May 27-28, 2004.

Icabalceta, Jorge. "The Effects of Hypoxia on Louisiana Commercial Fishing Patterns: Three Case Studies." Poster presented at a conference entitled: Challenges of Socioeconomic Research in Coastal Systems: Valuation, Analysis, and Policy Development. Center for Natural Resource Economics & Policy (CNREP), Louisiana State University Agricultural Center, Baton Rouge, Louisiana, May 27-28, 2004.

Keithly, Walter R., Jack C. Isaacs, and Cheikhna Dedah. "An Economic Analysis of Nutria Population Control." Poster presented at a conference entitled: Challenges of Socioeconomic Research in Coastal Systems: Valuation, Analysis, and Policy. Center for Natural Resource Economics & Policy (CNREP), Louisiana State University Agricultural Center, Baton Rouge, Louisiana, May 27-28, 2004.

Isaacs, Jack C. and Yeong Nain Chi. "Why Louisiana Anglers Fish: An Empirical Analysis." Oral presentation at the 10th International Symposium on Society and Resource Management, Keystone, Colorado, June 2-6, 2004.

Representation on Task Forces, Study Groups, and Committees

During fiscal year 2003-2004, staff members of the Socioeconomic Research and Development Section represented LDWF on the following task forces, study groups, and committees:

- Gulf States Marine Fisheries Commission FIN Social/Economic Work Group
- Louisiana Seafood Industry Advisory Board
- Louisiana Blue Crab Task Force
- Louisiana Geographic Information Systems Council (Vice-Chair for 2004)
- Socioeconomic Panel of the Gulf of Mexico Fisheries Management Council
- Technical Advisory Committee for the U.S. Fish and Wildlife Service's National Survey of Fishing, Hunting, and Wildlife-Associated Recreation

Special Programs

Special programs administered by the section during fiscal year 2003-2004 included the Clean Vessel Program, Customer

Service Program, Fishermen's Logbook Program, Louisiana Oyster Shell Recovery Pilot Project, Shrimpers' Economic Assistance Program, Louisiana Nutria Harvest and Environmental Impact Project, and the Language Assistance Program. A description of each program and a list of accomplishments for fiscal year 2003-2004 are presented below.

Clean Vessel Program

The Clean Vessel Program provides funds to owners of recreational boating facilities for construction and renovation of boat sewage disposal facilities. The purpose of this program is to reduce overboard discharge of raw boat sewage in Louisiana's waters by providing boaters with a safe and convenient method to dispose of boat sewage. Under the program, recreational boating facility owners are reimbursed up to 75 percent of the costs of approved activities. Funds are also used to develop and distribute educational and promotional materials to encourage boaters to use these facilities and to promote environmentally responsible behavior.

Accomplishments in 2003-2004 included construction progress on a boat sewage disposal facility at Forsythe Point on the Ouachita River (City of Monroe), entering into an agreement with Marina del Ray in Madisonville for replacement of an existing pumpout unit on the Tchefuncte River, and the distribution of numerous promotional and educational items.

Educational information and/or promotional items were distributed at the following events:

- Sportsman's Paradise Hunting, Fishing, and Outdoor Exposition. Gonzales, Louisiana. August 2003.
- National Hunting and Fishing Day. Minden, Louisiana. September 2003.
- Louisiana Association of Conservation Districts Annual Conference. Baton Rouge, Louisiana. February 2004.
- Earth Day Celebration. Baton Rouge, Louisiana. April 2004.

Customer Service Program

The Louisiana Department of Wildlife and Fisheries' statewide Customer Service Program was established in 1999 to ensure the delivery of effective, efficient, and responsive customer service to Louisiana residents, users of resources managed by the department, and departmental employees.

Customer Service Program accomplishments for fiscal year 2003-2004 include:

- Ongoing upkeep of the customer service comment database and tracking system via the customer service channels
- Development and execution of a customer service-related survey at the Sportsman's Paradise Hunting, Fishing, and Outdoor Exposition in Gonzales, Louisiana in August, 2003
- Published the analysis of a survey of department employees to discern their perceptions of the Human Resources Section in April, 2004
- Published the analysis of a survey of media outlets regarding the Department's Public Information Section in July, 2003

- Development, execution, and analysis of a survey of vendors who issue Wildlife and Fisheries licenses to the public in Spring, 2004
- Development of the fourth annual Customer Service Assessment Report
- Development of the fifth annual Customer Service and Employee Action Plan
- Development and distribution of an internal subject-indexed telephone list, including parish contacts for enforcement, wildlife, inland fisheries, and marine fisheries
- Development of a subject-indexed telephone list for use by the public placed on the Department's Internet contacts page
- Development and implementation of a new directory for the lobby and foyers of the Department Headquarters in Baton Rouge
- Development and implementation of a 40-minute customer service presentation at LDWF new employee orientation which includes the video "Quality Service in the Public Sector"

Fishermen's Logbook Program

The Fishermen's Logbook Program was funded by a National Marine Fisheries Service grant (NA76FK0429). The program was designed to track commercial fishing patterns in relation to environmental perturbations in Louisiana and Gulf waters. Business investment and trip related costs associated with shrimp and charter boat operations were collected for the years 1999-2001. The Fishermen's Logbook Program ended in fiscal year 2003-2004 with the writing of a final report on the findings of the information collected from logbook and survey data.

Louisiana Oyster Shell Recovery Pilot Project

The Socioeconomic Research and Development Section administered a project to research the feasibility of collecting oyster shells from processors and other users for use as reef-building material to enhance the state's public oyster beds. This project, supported by a National Marine Fisheries Service grant (NA96FK0188), consisted of two main efforts:

- Estimation of the value of Louisiana's oyster reefs as recreational fishing grounds. A telephone survey of residential recreational anglers was designed and implemented in 2001. A report based on the results of this survey was published in April, 2004.
- Design of a pilot program to collect oyster shells from processors for deposition on public oyster reefs. Louisiana Department of Wildlife and Fisheries employees met with several processors and local government officials and assessed their possible contributions to an oyster shell recovery program. Department employees obtained cost estimates for the collection, delivery, and deposition of cultch materials in several locations along the Louisiana coast. The findings were published in a report in April, 2004.

LDWF employees also met with representatives of other state and federal government agencies to discuss the feasibility of collecting oyster shells from Louisiana restaurants to use as reef

material. No action was taken on this issue but interest in such a project remains.

Louisiana Shrimpers' Economic Assistance Program

This program, jointly administered by the Socioeconomic Research and Development Section and the Marine Fisheries Section of LDWF, was established by the allocation of approximately \$8.7 million of disaster assistance funds from the U.S. Department of Commerce. LDWF personnel assisted commercial shrimpers and legislative officials in designing a plan for the most equitable and beneficial use of the funds. Under the plan, approved by then Governor Mike Foster, approximately \$7.2 million of the funds were distributed as direct payments to 3,894 commercial shrimpers who filed applications and met qualifying criteria. Approximately \$1.1 million were designated for shrimp marketing/promotion and fair trade issues. The remaining funds were used for administrative expenses and for ongoing promotion and research efforts.

Louisiana Nutria Harvest and Environmental Impact Project

The Socioeconomic Research and Development Section, in cooperation with the LSU Department of Agricultural Economics and the Coastal Fisheries Institute, began a project in fiscal year 2003-2004 to examine the economics of nutria pelt harvests and the impact of nutria populations on Louisiana's coastal marsh. This project consists of three main stages:

- Estimation of Supply Curve for Nutria Pelts in Louisiana Coastal marshes. This stage will develop a supply curve for nutria pelts using historical data for Louisiana nutria harvests and prices plus environmental variables such as wetland acreage and winter severity. This will allow the estimation of expected harvests under alternative trapper incentive levels (bounties).
- A Bioeconomic Model of Nutria Harvests and Related Impacts on Louisiana Coastal Marsh. This research will employ a published biological model of nutria populations, marsh biomass, and wetland acreage developed by the USGS National Wetlands Research Center in Lafayette, Louisiana in order to examine the efficacy in maintaining coastal marsh of alternative nutria harvests under various price levels.
- Estimation of Nutria Pelt Demand This portion of the project will examine the factors that influence the trapper-level demand for nutria pelts in Louisiana. Researchers have obtained domestic fur harvest data for several species from the United States Department of Agriculture and international trade data from the United Nations.

LDWF Language Assistance Plan

Presidential Executive Order 13166 (P.O. 13166), signed on August 18, 2000, was designed to better implement and enforce the existing obligations set forth by Title VI of the Civil Rights Act of 1964, which protects recipients of federal financial assistance from discrimination based on national origin. One example of discrimination is failing to provide meaningful access to individuals who have limited English proficiency (LEP). Pursuant to this order, all state agency recipients of federal funds are

required to provide equal access to federally financed programs to individuals with limited English proficiency.

The United States Fish and Wildlife Service (USFWS), a federal agency that works in cooperation with the Louisiana Department of Wildlife and Fisheries (LDWF) and funds activities conducted by this agency, notified LDWF of the need to develop a Language Assistance Plan (LAP) to improve the access of persons with limited English proficiency (LEP) to LDWF programs.

The Socioeconomic Research and Development Section was given the task of developing an effective language assistance plan for the department. The SRD Section organized and chairs the LAP Committee, consisting of representatives from all of the various divisions, sections, and programs within LDWF. The LAP Committee developed a plan for a departmental self-assessment process, which will gather data on the LEP people-groups which utilize LDWF services, as well as existing language assistance capabilities which already exist within LDWF. The self-assessment program, which is being undertaken in fiscal year 2004-2005, serves as "Phase 1" of the development of the LAP. The design and timeframe for the self-assessment program were submitted to USFWS in June 2004, and subsequently approved.

Following the completion of the self-assessment process, the SRD Section will work with the LAP Committee to develop and implement a Language Assistance Plan which ensures that LDWF programs are readily accessible to all LEP people-groups identified in the self-assessment process.

LICENSING

The licensing division continues to improve process to better serve our customers. We improved service to our commercial fishing customers by making commercial fishing licenses available at the Bourg Office for three days during December and again in April. We have made recreational licenses available at the Opelousas and Monroe offices. License sales and revenue collected are as follows:

- 1.75 million recreational hunting and fishing licenses generated \$19.35 million in revenue
- 79,839 commercial licenses sold, generating \$3.39 million in revenue

Maintained records for 324,900 active boat registrations and processed in excess of 154,845 boat registration transactions which generated \$3.6 million in revenue.

Licensing staff attended the Conservation Business Managers Association annual conference and Southeastern Association of Fish and Wildlife Agencies annual conference.

PROPERTY CONTROL

The Property Control Section has program responsibility for the Property Control Program, Fleet Management Program, and Risk Management Property Program.

Property Control Program

The Property Control section processed \$4,366,488 in acquisitions and \$3,780,930 in dispositions of moveable property during fiscal year 2003-2004.

This program also certifies a moveable property inventory which consists of 8,123 items for a total acquisition cost of \$42,940,497. Annually, the program is responsible for conducting a complete physical inventory of all inventoried moveable property at the various 88 locations throughout the state.

Fleet Management Program

In accordance with State Fleet Management Regulations this section records, approves and processes requests for personal assignment or home storage; daily vehicle usage; vehicle maintenance; titles, registrations and vehicle licenses for the department's 566 fleet and 570 other licensed vehicles.

The Fleet Management Program also manages and maintains a motor pool of 12 vehicles assigned to the Baton Rouge Headquarters Motor Pool.

Risk Management Property Program

The Property Control Section is responsible for filing and recovering payment from vehicle collision, comprehensive, and property damage claims.

Driver's authorization and annual certification for the department's approximate 800 employees is also a responsibility of the Property Control section.

COMPUTER CENTER

The Mission Statement for the Louisiana Department of Wildlife and Fisheries Computer Center is:

- To enable LDWF to accomplish agency wide goals and objectives.
- To install and maintain servers, printers, storage devices, personal computers and other associated devices in an efficient, dependable, and secure manner for the purpose of sharing information and services between LDWF employees and associated parties.
- To provide and maintain a network infrastructure of cables, fiber, and connectors for the purpose of providing a dependable medium for the transfer of data and services.

- To recommend to users personal computers and other devices that will meet their needs, considering technology, service, purpose, and cost.
- To assist users in solving problems involving personal computers, printers, and other associated devices.
- To produce custom written applications for use by various sections of the department.

The computer center is responsible for maintaining the department's information processing resources. The center operates three mainframes and nine Intel based "windows" servers. We support 475 computers in 15 locations throughout the state, and the network infrastructure that ties them all together. We offer training, help desk support, custom programming, database services, email services, Internet access, user data backup for head-quarter users, statistical analysis tools for biologist, and imaging services to name but a few.

Accomplishments from our Application Development team over the past year includes: developing a web based Boating Safety student grading system to be entered by certified boating instructors, processing of online Boating Safety Courses, enhancing our existing Commercial License system to allow for collection of fees for Shrimp Marketing, and Promotion Accounts. We have also completed 90 percent of the project for converting the "Enforcement Citation and Accounting" system from a main-frame legacy to a web based system .

In addition to standard daily PC/Network support, our technical support team has leveraged low cost cable and DSL access methods to provide high-speed internet service to our field office for a minimal cost.

Our operations center continues to scan and archive:

- trip ticket data
- enforcement timesheets
- enforcement complaint forms
- LADT Invoices
- bow hunter safety forms
- seafood inspection forms
- vessel inspection forms
- hunter safety forms
- monthly submission reports
- employee documents (in conjunction with HR)
- revenue checks
- DMAP invoices
- Shrimp Excise Tax form processing

WILDLIFE

Research and Management

A wide range of research and management work is conducted in order to maintain healthy productive populations of game and to provide recreational opportunities for citizens to enjoy these species. Staff biologists gather data on game birds and animals, largely for use in formulating hunting regulations and development of habitat management recommendations. They develop workshops for the department and other agencies' personnel training and present seminars to the public. In addition, they represent the department on state, regional, and national committees, providing wildlife input to a wide array of public agencies, NGOs and private industry. The game species programs are Upland Game, White-tailed Deer, Waterfowl, and Wild Turkey.

White-tailed Deer

During the 2003-2004 deer season, 167,800 deer hunters in the state harvested 222,700 white-tailed deer. On WMAs during managed deer hunts, there were 2,397 deer harvested. The total hunter effort for the managed deer hunts was 19,661. The Deer Management Assistance Program (DMAP) cooperators harvested 28,184 deer. There were 1,436 clubs and landowners enrolled in this program. The new Landowner Antlerless Deer Tag Program was initiated statewide in 2004.

Deer harvest information was entered into a computer program for analysis and evaluation. This data was used to establish deer seasons for the 2004-2005 season. Harvest data for WMAs and DMAP cooperators are summarized in Federal Aid W-55-18 Report.

December 31, 2003 marked the end of the 4th Louisiana Big Game Recognition Program. The recognition booklet for this time period is available from the Deer Program of the Wildlife Division. Deer harvested during the years 2004-2006 will be documented in the 5th Louisiana Big Game Recognition Program. Trophy deer that qualify for the State Record List will be added to that list annually.

Disease and parasite investigations continued on both private and public lands. The 2004-2005 season will mark the end of the experimental antler regulation program in Iberville, Pointe Coupee, and West Baton Rouge parishes. Deer herds were again sampled for Chronic Wasting Disease (CWD) in 2003. Over 1000 samples were collected from around the state and all samples tested negative for the disease.

Upland Game

Dove

Populations have been monitored nationwide since 1953 by a call-count survey. This survey is used by the U.S. Fish and Wildlife Service to monitor mourning dove population trends. Biologists record the number of doves heard calling for a prescribed time during the nesting season along certain roadsides. Louisiana's dove population is monitored during May and June along 19 routes randomly located throughout the state. The Louisiana breeding population index based on doves heard along

the routes was 13.9. This represents an 18.2 percent decrease in doves heard from 2003. However, the 10-year and 38-year trends illustrate significant increases of at least 2.4 percent annually.

Dove hunting regulations for Louisiana in 2003-2004 were set at 70 days with a bag limit of 12 birds. Shooting hours remained unchanged from the year before, allowing all-day hunting, except on opening weekends of each segment when hunting was restricted to afternoons only. A survey of resident license holders indicates that approximately 55,000 Louisiana hunters harvested almost one million doves during the 2003-2004 hunting season.

In addition to dove fields on Wildlife Management Areas, the department leases property from private landowners for public hunting. This land is leased for public hunting on opening day only. In 2003, five fields totaling 1,471 acres were leased. During the opening day hunt, 748 hunters participated, bagging 963 doves.

In the spring of 2003, the U.S. Fish and Wildlife Service adopted a National Mourning Dove Harvest Management Plan. The plan was stepped down to each management unit during 2003/04. Determining current harvest rate was identified as a key component of each management unit plan. Wildlife Division personnel banded almost 1,300 doves during July and August 2003 as part of a 26-state pilot banding program.

Quail

Statewide fall whistling counts were conducted on 41 randomly located routes and an additional six routes on department WMAs and the Kisatchie National Forest. All regions of the state except the south-central region exhibited statistically nonsignificant increases over the prior year. The south-central region exhibited a nonsignificant decline from the prior year. Inferences about population status and habitat conditions were developed based on the combined results of these two survey techniques and general observations by department personnel during the breeding season. Data are summarized in the Federal Aid W-55-18 Annual Report.

A survey of resident license holders indicates that approximately 3,200 Louisiana hunters harvested 17,500 quail during the 2003-2004 season.

Work continued on a research project to investigate response of bobwhite quail to habitat enhancement by use of selective herbicides that was begun in the fall of 2001. The department contracted with the LSU School of Renewable Natural Resources to conduct this project.

Woodcock

A woodcock banding program was initiated in 1990 to determine sex and age ratios, site fidelity, movement patterns and harvest rates of woodcock wintering in Louisiana. From November 2003 through January 2004, 152 woodcock were banded on Sherburne WMA. Eight direct band recoveries (5.9 percent) by hunters were reported. Hunters on Sherburne also provided data on hunt characteristics through use of mandatory self-clearing stations. Data are summarized in the Federal Aid W-55-18 report.

The department participated in the U. S. Fish and Wildlife Service's Annual Woodcock Wing Bee in 2004. Data derived from aging and sexing about 11,000 woodcock wings were used to develop trend data on woodcock production and hunter success. These data, in combination with breeding bird surveys, are used to develop management strategies for woodcock. Although many people in Louisiana consider woodcock an underutilized species, Louisiana's harvest of woodcock at one time ranked among the nation's highest. However, the number of woodcock hunters has decreased by over 90 percent since their peak in the early 1980s. A survey of resident license holders indicates that approximately 4,000 Louisiana hunters harvested 17,700 woodcock during the 2003-2004 season.

Wild Turkey

A poult production survey was initiated in 1994 to assess annual brood rearing success and monitor long-term production trends. The survey indicated a good to excellent hatch throughout much of the northern portion of the state. In the south central and southeast regions production was poor.

The most recent hunter harvest survey indicated 25,800 turkey hunters harvested 9,000 wild turkeys during the spring of 2003. The wild turkey population in Louisiana is estimated at about 80,000 birds.

The department is supporting and participating in three wild turkey research projects. Wild turkey habitat use and ecology are being investigated on Sherburne WMA by a graduate student from the LSU School of Renewable Natural Resources with support from the department and the Louisiana Chapter of the National Wild Turkey Federation. A project to determine harvest rates of gobblers in north central Louisiana is being conducted by the Louisiana Tech University School of Forestry with support from the department and the Louisiana Chapter of the National Wild Turkey Federation. In addition, the department is involved in a gobbler banding project in Washington Parish to develop harvest rate estimates. A reward band component was added to this project during the 2004 turkey hunting season.

New habitat development projects were initiated on six Wildlife Management Areas. The department and cooperators such as the Louisiana Chapter of the National Wild Turkey Federation, Entergy Corp., Weyerhaeuser Corp., and Cleco Corp. improved brood and nesting habitat on power line rights-of-ways roadsides, fire lanes, and logging decks.

Two wild turkey releases were made in 2003-2004. A release consisting of 15 birds was made in northern Pointe Coupee Parish. Birds for this release came from within Louisiana. Twenty wild turkeys from South Carolina were released in Assumption Parish. The Louisiana Chapter of the National Wild Turkey Federation funded this release.

Inventory

Louisiana has approximately 3.5 million acres of coastal marsh that winter large and diverse waterfowl populations. Aerial waterfowl inventories of the entire coastal marsh, as well as associated agricultural lands in north central and northwest Louisiana, are conducted each winter.

The midwinter inventory, conducted in early January, indicated 3.85 million ducks and 648,000 geese wintered in the coastal marsh and inland areas of the Mississippi Delta during January 2004.

Based on federal harvest estimates, in the 2003-2004 waterfowl hunting season there were 66,000 active duck hunters that harvested 1.3 million ducks. This represents a 9 percent increase in the number of duck hunters, and an increase of 14 percent in the duck harvest compared to the previous year. Species composition were: green-winged teal (17 percent), gadwall (20 percent), blue-winged teal (25 percent), mallard (10 percent), wood duck (9 percent), with scaup, pintail, shoveler, wigeon and ring-necked duck comprising most of the remainder.

Goose harvest increased by 22 percent in 2003-2004 to 172,000. White-fronted geese comprised 50 percent of the harvest and light geese (snows, blues and Ross's) 48 percent. Canada geese are an important bird in the bag locally, but were less than 2 percent of the total goose harvest statewide.

North American Waterfowl Management Plan

Louisiana is continuing to play an important role in the North American Waterfowl Management Plan (NAWMP). Portions of two NAWMP joint ventures are located in Louisiana: the Gulf Coast and Lower Mississippi Valley. The department has strived to maintain ongoing projects and other activities associated with the NAWMP. In 2003-2004, an additional water control structure (WCS) was installed at Ouachita WMA to improve moist soil management capability in the Pintail Alley units. A new WCS was installed at Grassy Lake WMA to facilitate managed drawdowns at Red River Bay. Wetland enhancement work on approximately 700 acres was completed on Buckhorn WMA. Three new employees attended a moist soil management workshop at the Gaylord Memorial Laboratory in Puxico, Missouri. A \$1 million North American Wetlands Conservation Act grant was awarded to the department for shoreline stabilization work at Manchac WMA.

The Louisiana Waterfowl Project, a private land wetlands development program, has completed its 13th year. This is a cooperative statewide program involving LDWF, Ducks Unlimited, U.S. Department of Agriculture/Natural Resource Conservation Service, various pipeline companies, and selected private landowners. The U.S. Fish and Wildlife Service became a partner in 1999-2000. During 2003-2004, 33 landowners participated in LWP resulting in the restoration or enhancement of 4,717 acres. Since program inception in 1992, over 60,000 acres have been restored or enhanced. LWP program goals and activities in the north part of the state are shifting more towards the Red River Valley, and LWP South will be focus more on marsh habitats, and fallow rice fields in the coastal zone.

Wood Ducks

During 2003, the department banded 791 wood ducks, a small decline from 854 banded in 2002. Approximately 380 of these birds were captured with cannon nets and 411 were hens banded in wood duck nest boxes.

The wood duck box program completed its fourteenth year in 2003. An additional 115 boxes were installed on department

WMAs. There are greater than 2,800 boxes in use now; 1,167 of these are within Region VI. Box utilization by nesting wood ducks was high this year and ranged from 45 to 100 percent with an average of 80 percent. It is anticipated that additional 100 boxes will be added in 2004.

Land Acquisition

Land acquisition and development for wildlife management purposes is the best way to ensure that there is sufficient quality habitat for the state's diverse wildlife resources. During fiscal year 2003-2004, one acquisition of 20 acres was completed and added to Sicily Island Hills WMA. A new lease with the Tangipahoa Parish School Board added 483.6 acres to Joyce WMA. Under the lease agreement another 1,643 acres were made available to establish the new Tangipahoa Parish School Board WMA.

WMA Forest Management

The mission of the Forest Management Program is to improve forest and wildlife habitat on WMAs through sound forest management, reforestation practices and active forest/wildlife research activities. This program also serves to demonstrate the integration of forest management and wildlife habitat management to private landowners.

Public Lands

General forest inventories were conducted on 19 scheduled compartments of 17 WMAs. Prescription developments were completed on 29 compartments of 17 WMAs to plan habitat work on those WMAs.

Harvest preparations, including sale layout, inventory, regeneration counts, marking, map work, and proposal preparations were conducted on Big Lake, Buckhorn, Dewey Wills, Little River, Ouachita, Pearl River, Pomme de Terre, Red River, Russell Sage, Sherburne, Sandy Hollow, and Three Rivers WMAs. Renewed market interests and increased activities across the state resulted in our ability to increase our activity on past prescribed habitat treatments. Timber harvests to improve wildlife habitat were conducted on Bayou Macon, Red River, Sherburne and Three Rivers WMAs. Forestry Section staff performed monitoring of these operations, with assistance from WMA technicians. The salvage operations on Dewey Wills were minimal this year due to extensive wet weather during the normal logging period. However, coordination was continued with several research organizations attempting to establish an understanding of the oak decline we are experiencing on this area. Additional habitat treatment was accomplished on Sherburne WMA through chemical treatment of non-native invasive species; Chinese tallow tree. No southern pine beetle infestations/outbreaks were reported on WMAs this year, only small spots developed due to lightning strikes and/or prescribed burning hot spots.

Reforestation work was continued on other department properties with concentration on Buckhorn, Dewey Wills and Red River WMAs. Activities included site development and preparation, seedling or seed planting, survival plot establishment, and survival checks. Approximately 1,330 acres were reforested during the 2003-2004 season.

Acorn and various tree seed collections were conducted to ensure a seed and seedling source for future reforestation efforts. The annual WMA mast survey aids this effort by concentrating collection efforts where the most needed types of trees species are available. The mast survey also provides an indication of the future abundance of forest wildlife species such as squirrels.

TSI work continued on Sherburne with an attempt to control Chinese tallow tree invasion by injecting the mature seed producers along the Atchafalaya River levee and the major rights-of-way leaving the levee road. Similar work was carried out on Sandy Hollow for Chinese tallow tree and cogon grass control.

GPS work on WMA trails, roads, lakes, compartment and area boundaries was accomplished to aid in the overall WMA management program. Our GIS program development continued with emphasis on historical data input relative to our WMA forest management activities. This data has been utilized to guide the non-game species surveys being accomplished on the WMAs.

Growth Monitoring Plots (GMPs) were established on Floy McElroy, Big Colewa and Boeuf WMAs, and reestablished on Ouachita WMA. These permanent plots aid in monitoring habitat conditions and effects of our forest management program on the habitat components represented on the WMAs.

The Southern Hardwood Foresters Group Spring meeting was hosted on Red/Three Rivers WMAs this year, providing a continuing education look at our bottomland hardwood forest and hardwood plantation management. Additionally, new research projects were established in the plantation on Red River to find answers for some of the carbon sequestration questions arising, as well as a new "quality oriented thinning management program" being tested by USDA Forest Service. These activities are accomplished to foster a better understanding of benefits for the forest, wildlife and people gained through appropriate and long-term oriented forest management practices.

Region I

Region I (northwest Louisiana: Bienville, Bossier, Caddo, Claiborne, DeSoto, Red River, and Webster parishes). Habitat consists primarily of rolling, mixed pine-hardwood and pine plantation habitat bisected by the Red River system and its associated bottomland agricultural lands. Five WMAs (Bayou Pierre, Bodcau, Jackson-Bienville, Loggy Bayou and Soda Lake) are located in Region I and encompass a total of 77,632 acres.

Personnel from Region I administered and managed numerous Wildlife Division programs. Programs included bobwhite quail spring and fall surveys, annual winter eagle surveys, spring dove call routes, dove banding, mast surveys, spring turkey gobbler count surveys, turkey trapping, banding and release activities, and administered the game and non-game breeder permit program. Personnel also collected white-tailed deer for general herd health and reproduction projects, CWD monitoring and also administered DMAP activities. Personnel served as technical wildlife consultants to numerous private landowners, municipalities and state and local government officials and agencies.

Region I wildlife management areas are managed to provide diverse wildlife habitat supporting numerous game and non-game wildlife species and provide quality outdoor recreational opportunities for the public. A total of 27,853 user days were estimated for Region I WMAs. Region I personnel continued working with the Jackson-Bienville Wildlife Habitat Program which provided more than \$25,000 of non-department revenue for the development of bobwhite quail, turkey and red-cockaded woodpecker habitat on Jackson-Bienville WMA. Funds were also provided to promote hunter safety and wildlife management education.

Region II

Region II (northeast Louisiana: East Carroll, Jackson, Lincoln, Morehouse, Ouachita, Richland, Union, and West Carroll parishes). Habitat types consist of rolling, mixed pine-hardwood forest, agricultural lands and Mississippi River bottomland forests. The Bayou Macon, Big Colewa Bayou, Floy Ward McElroy, Ouachita, Russell Sage and Union Wildlife Management Areas are located within the region.

Region II biologists conducted a wide range of activities including research and surveys, conducting public meetings, providing technical assistance to landowners relative to habitat management and wildlife populations, interacting with various universities as well as parish, state and federal agencies in reference to projects of mutual concern, conducting the alligator management program at the region level, and numerous additional projects.

Region II wildlife management areas were managed to provide habitat and population management for deer, turkeys, squirrels, waterfowl, rabbits, doves, non-game birds, furbearers and other species. Recreational opportunities were provided to thousands of hunters, fishers, campers, sightseers and other public users. Recreational user days recorded for Region II wildlife management areas totaled 38,043. Either sex gun hunts for deer attracted 3,418 hunters resulting in a harvest of 404 deer.

Additional opportunity for bucks only gun hunting, muzzleloader, archery and youth only hunting yielded a harvest of almost 150 additional deer. Youth deer and dove hunters on the Floy McElroy Wildlife Management Area had a very successful season. Turkey hunting was provided on Bayou Macon and Union wildlife management areas. Ouachita and Russell Sage wildlife management areas provided quality waterfowl hunting for several thousand persons including some who traveled from Kentucky, Arkansas, Illinois, Mississippi, Texas and other states.

Wildlife management area personnel performed a variety of development and maintenance functions such as boundary marking, road maintenance, water control structure operation, moist soil management, beaver and other nuisance animal control, farm contract supervision, equipment maintenance, public user data collection, vegetation control, food plot planting, reforestation, and conducting managed hunts. The headquarters/check station on Union WMA was relocated due to the sale of the old site by the prior landowner. Several miles of roadway were resurfaced with limestone rock on the Ouachita and Russell Sage WMAs.

Region III

A variety of projects were implemented or completed on Region III WMAs in 2003-2004. Efforts to improve the road system on Dewey Wills and Little River WMAs were continued. Crushed stone was applied to approximately five miles of roads. In addition three miles of roads were ditched to improve drainage. The Office of Rural Development awarded a competitive grant to improve the ATV trail system on Dewey Wills WMA. Work is scheduled to begin in 2005. A pilot Youth Only lottery deer hunt on Dewey Wills WMA was expanded in 2003-2004. This hunt differs from regular youth hunts in several ways. It is a limited lottery and the hunt area is reserved for these special hunts. Also, box stands are provided for the participants. Feed back on the program has been very positive.

Negotiations with Louisiana State University at Alexandria to enter their property into a wildlife management program were opened. Initial plans call for Region III personnel to assist with wildlife management practices and provide input in developing a wildlife management plan for the area. A wood duck nest box program was the first practice implemented. In addition it is probable that some limited public access for recreational uses can be provided in the future.

Five WMAs are located within Region III. Catahoula Lake and Elbow Slough are additional areas of responsibility. All of these areas are managed to provide wildlife habitat and outdoor recreational activities. Total user days were estimated at 191,179.

Routine maintenance activities on the State owned areas included road grading, culvert replacement, spot repairs, drainage improvements, and beaver control. On all WMAs boundary work, sign replacement, self-clearing station maintenance, vegetation control, equipment and facility upkeep were performed. In addition WMA personnel conducted user interviews and operated weigh stations. Wildlife food plots were planted on Camp Beauregard, Sabine and Elbow Slough. Most WMAs have a number of wood duck boxes that require annual maintenance. Region III procured wood duck boxes for statewide distribution. The technical staff consulted with DMAP clubs and private landowners on wildlife and habitat management issues, trapped and banded wood ducks, collected CWD samples, participated in the dove banding program, compiled data and submitted reports, and handled miscellaneous problems along with routine duties.

Region IV

Region IV is comprised of six Louisiana parishes (Caldwell, Catahoula, Concordia, Franklin, Madison, and Tensas) located in the east central portion of the state. Habitat types of this region are very diverse, ranging from upland mixed pine--hardwood forests in the west to the bottomland hardwood forests along the Mississippi River. Agricultural lands generally dominate the landscape, but the alluvial floodplains of the Boeuf, Black, Red, Ouachita, Tensas, and Mississippi Rivers produce a rich and varied topography that supports a bounty of resident and migratory birds and mammals.

Centrally located in the town of Ferriday, the Regional office administers six department-owned WMAs. Big Lake, Boeuf,

Buckhorn, Red River, Sicily Island Hills, and Three Rivers WMAs provide the public with almost 161,000 acres on which to hunt, fish, and enjoy the natural areas of our state. The self-clearing check stations of Region IV recorded over 72,000 hunters and fishermen during 2003-2004, and almost 15,000 non-consumptive users (campers, backpackers, ATV riders, bird-watchers, etc.) can be added to this total. Estimated numbers of hunters, fishermen, and non-consumptive users of Region IV WMAs exceed 100,000.

Deer hunting continues to attract the most hunters to Region IV, and 18,364 deer hunters harvested 1,589 deer from WMA public lands. Archery, muzzleloader, and rifle seasons attract resident hunters from every parish in the state and from dozens of states outside Louisiana. One out of every 12 Region IV WMA deer hunters harvested a deer, an average that compares favorably with any public land in the southeastern states. Soil fertility of the region produces browse vegetation with exceptional nutrition, and the chance of a WMA deer hunter harvesting the buck of a lifetime has never been better. The department's efforts in forestry management and restoration are recognized nationally, but Region IV deer hunters have known for decades that it produces trophy class deer.

Almost 10,000 small-game hunters enjoyed a relaxing squirrel and/or rabbit hunt on Region IV WMAs. Whether a small game hunter chooses to still hunt or follow his pack of favorite beagles or a mountain cur squirrel dog, the opportunities are available. The department continues to develop moist soil impoundments and greentrees for waterfowl hunters in Region IV, and the possibilities for acquiring former agricultural lands makes expansion of waterfowl opportunities even greater. Turkey populations continue to expand after a decade of good poult production, and almost 1,400 turkey hunters harvested 98 turkeys on WMA property.

LDWF recognizes that the future of hunting and the outdoor sports depends on the involvement of our youth. Youth turkey hunts on Big Lake WMA and youth deer hunts on Boeuf and Red River WMAs have been popular events, and these opportunities will probably be expanded throughout Region IV.

Big Lake WMA hosted six UKC and PKC field trials and championship coon hunts during 2003-2004. The topography of the WMA and the abundant coon population attract coon hunters and high-priced coon dogs from around the state.

Previous reference has been made to "civilized" non-consumptive uses on the Region IV WMAs, but nothing compares to the spectacle of the Wish I Could ATV Trail Ride held annually on Boeuf WMA. On June 5, 2004, four thousand two hundred ninety ATV's entered the WMA to attempt the Marengo Swamp Suicide Run, a 17-mile long trail ride through some of the mud-diast and boggiest terrain in the Region. Some riders completed the course, and some didn't.

Private landowners in Region IV continue to respond positively to LDWF DMAP (Deer Management Assistance Program). One hundred ninety-one private landowners and hunting clubs enrolled 340,000 acres of property into the program. From this

enrolled acreage deer hunters harvested just over 4,500 deer (31 percent antlered bucks and 69 percent antlerless deer). As part of the program, Region IV biologists provide these private landowners with biological habitat surveys and harvest recommendations.

If questioned, most people would associate Louisiana alligator hunting with our coastal marsh and swamp habitats. But alligator hunting is becoming more and more popular every year in northeastern Louisiana. During 2003, the Region IV alligator program issued 432 tags to alligator hunters (307 tags to private land hunters and 125 to public lakes hunters). Two hundred eighty-three (66 percent) tags were used by 88 hunters.

Alligator hunting in the coastal zone may be largely seen as a commercial activity, but in northeastern Louisiana it is commonly enjoyed as a social event. Entire families submit applications for the public lakes lottery, and in recent years more than 3,000 applications have been submitted each year by the public. Region IV alligator hunters continue to take trophy

Region V

Region V (southwest Louisiana: Acadia, Allen, Beauregard, Calcasieu, Cameron, Evangeline, Jefferson Davis, Vermilion and Vernon parishes). Habitat ranges from extensive coastal marshes, to prairies and vast agricultural areas, to hardwood bottoms, to rolling hills of pine plantations and mixed pine-hardwoods. Seven WMAs (Boise Vernon, Fort Polk, Marsh Bayou, Peason Ridge, Sabine Island, Walnut Hill and West Bay) totaling 260,000 acres are managed within the region.

Region personnel administered a variety of Wildlife Division activities. These include environmental assessments, technical assistance, research, planning, development, management, alligator and nuisance animal programs. Technical advice is provided to the public, Federal, State, National Wildlife Refuges and local agencies. Region personnel assist 200 private deer hunting clubs encompassing 500,000 acres with the departments Deer Management program (DMAP) and Landowners Deer Tagging Program (LADT). The Region personnel participated in a nation wide dove banding program by trapping and banding 200 doves. Special public dove hunts were held on 800 acres of land the department leases in September, with 224 hunters harvesting 994 doves. Region 5 handles a large number of resident alligator hunting applications issuing over 84 licenses, 700 tags and 38 non-resident alligator hunting license and the shipping requirements of alligator hides.

Region V WMAs were managed for a variety of fish and wildlife species and provides outdoor recreational opportunity. These areas are readily accessible and are very popular with the public. Along with public hunting and fishing opportunities, these areas provide many types of non-consumptive activities. A total of 29,821 people (238,568 hours of recreation) used these areas from Nov. 2003 through Oct. 2004.

Managed deer hunts on the four largest WMAs within the region resulted in 17,920 hunting efforts and harvesting 813 deer. The deer hunting efforts and harvest were lower than last year, believed as a result of the unusual warm weather. Two areas

offer special deer seasons for youth and handicapped hunters. Over 1225 turkey hunters harvested 94 gobblers from three WMAs. Special youth turkey hunting seasons were established on two areas, which were great successes.

The WMAs are leased free of charge to the department for public use from private landowners (Boise Paper, Roy O. Martin, Weyerhaeuser, U.S. Army, U.S. Forest Service, Forest Investments, Calcasieu School Board, Mopar and the State of Louisiana). To continue these lease areas requires Region personnel to meet and negotiate annual agreements with the landowners. The leases help the landowners properly manage their properties for wildlife and public recreation.

Habitat Manipulation, co-partnered with Boise Paper, Cleco Power and National Wild Turkey Federation to establish turkey food plots on service right-of-ways and abandon roads within Boise Vernon and West Bay WMAs. Co-partnered with U.S. Army and U.S. Forest to establish turkey and quail food plots on Fort Polk WMA.

Region VI

Region VI (south central Louisiana: Avoyelles, Assumption, most of Iberville, Iberia, Lafayette, Pointe Coupee, St. Landry, St. Martin, St. Mary, Terrebonne, West Baton Rouge, and portions of West Feliciana and Ascension Parishes). Habitat types range from mixed pine-hardwoods, to backwater bottomland hardwoods interspersed with agricultural lands, and cypress-tupelo swamps, to open-water areas. There are eight WMAs, comprising 117,797 acres (Acadiana Conservation Corridor, Attakapas, Elm Hall, Grassy Lake, Pomme de Terre, Sherburne, Spring Bayou, and Thistlethwaite), one federal Refuge, and U.S. Army Corps of Engineers property managed within the Region.

Region VI personnel administer and manage a variety of wildlife oriented activities. Region personnel work in conjunction and provide technical advice to many different agencies, including other state agencies, USFWS, USACOE, DNR, DEQ, Department of Agriculture, and local parish entities. Region personnel administer environmental assessments, technical assistance, research, development/management, alligator, and nuisance animal programs. Personnel assist with projects ongoing in the region, such as, woodcock, turkey, black bear, and non-game research projects. Region biologists worked with 268 DMAP clubs encompassing over 575,000 acres on which approximately 6900 deer were harvested. In addition to DMAP, nuisance program tags were issued to nine farmers in the Region.

Region VI wildlife management areas are maintained and managed to provide outdoor activity opportunities for all user groups, including both consumptive and non-consumptive. Recreational user days on Region VI WMAs totaled 111,645 by hunters, fishers, campers, sightseers, bird-watchers, and other public users. Managed hunts were held on these areas, where over 8,900 user-days were recorded, with 608 deer recorded harvested on these hunts. In addition to the managed (either-sex gun) hunts, bucks only, youth/handicapped, archery, and muzzleloader hunts also take place, where an additional 498 deer were harvested. Dove fields are maintained, along with many

acres of food plots. Region personnel maintain WMA boundaries, buildings, equipment, roads, and trails. Biologists and Technicians maintain and monitor over 800 wood duck boxes, conduct pre-season banding, collect samples for disease testing, respond to numerous animal complaints, and fawn/sick deer complaints. Improvements to Region VI WMAs have included: nw 2,000 gallon dump station with treatment pond for the campground at Spring Bayou WMA; new roofs on three buildings at Spring Bayou WMA headquarters; repairs made to Murphy's Ditch, water control structure installed on Red River Bay, repaired Smith Bay water control structure on Grassy Lake WMA; and limestone and culverts placed, as needed, on roads, trails, and parking areas, on all Region VI WMAs.

Region VII

Region VII (southeast Louisiana: most or all of Ascension, East Baton Rouge, East Feliciana, Livingston, Orleans, Jefferson, St. Helena, Tangipahoa, Washington, St. Tammany, St. Bernard, St. James, St. John, Plaquemines, St. Charles, Lafourche, West Feliciana, and a small portion of Iberville parishes). Habitat types range from marshes and swamps to rugged loess bluff uplands. Ten WMAs (Pearl River, Joyce, Manchac, Sandy Hollow, Ben's Creek, Hutchinson Creek, Tunica Hills, Maurepas Swamp, Tangipahoa Parish School Board, and Lake Ramsey) totaling 147,056 acres are managed in this region.

The WMAs are open for such public use as hunting, fishing, bird watching sight seeing, boating, hiking, horseback riding, photography and berry picking, as well as many other outdoor recreational activities. Over 95,000 user man-days were recorded on the management areas during the fiscal year. A limited alligator season was allowed on four WMAs. Region personnel maintained management area boundaries, buildings, equipment, roads and trails. Managed permit hunts were conducted on several Region WMAs.

Sandy Hollow WMA was intensely managed for dove and quail. Over 18 miles of quail dog field trial courses, six dove fields, 15 acres of food plots, 50 millet plots and 30 miles of foot strip planting were prepared. Controlled burning was conducted on some 2,500 acres. Approximately 115 food plots were planted and monitored on other WMAs.

Region biologists and technicians worked with 240 Deer Management Assistance cooperators, maintained over 325 wood-duck boxes, responded to numerous deer and nuisance animal complaints and collected samples for Chronic Wasting Disease testing. Research on wild turkey gobbler mortality is ongoing. Woodduck trapping operations were conducted.

FUR & REFUGE

Rockefeller Wildlife Refuge

Rockefeller Wildlife Refuge was created in 1920 through a land donation developed by E.A. McIlhenny for preservation and protection of migratory birds. The area is intensively managed for waterfowl, and is one of the most important wildlife areas in the United States.

Marsh Management, Restoration, and Mineral Management

Rockefeller's staff maintains over 200 miles of levees and 40 water control structures which result in conservation of approximately 76,000 refuge wetland acres, and additionally enhances water management capability of 100,000 private sector acres within the Mermentau River Basin. Objectives of maintenance and manipulation of the refuge's system of levees and water control structures vary somewhat by management unit, but generally goals are to maintain marsh health, provide conditions favorable for production of waterfowl food plants, and incorporate multi-species management when possible.

Habitat Enhancement/Restoration

Four marsh projects enhanced 29,080 acres during fiscal year 2003-2004. Projects included terrace building, water control structure and levee refurbishment, berm refurbishment, and drainage ditch cleaning.

Hurricane Claudette struck the southern Texas coast in July 2003 resulting in high tides which overtopped some levees and roads. Additionally, over 64 acres of beach eroded along the refuge coastline. High water cut around the southeast Price Lake water control structure which is managed for waterfowl and estuarine organisms. It was repaired and water level and salinity control was reestablished within the 7,500 acre management unit. This area is one of the most highly utilized areas for public recreation. Another major structure damaged was the sheet pile dam on Royalite Canal. The structure and levee were repaired and water level and salinity control regained within the 13,500 acre unit and neighboring private property within the 600,000 acre Mermentau Basin.

Heavy rainfall occurred during early summer 2004 causing water levels to rise approximately 1.4 feet above marsh level causing alligator nest flooding and wetland degradation in the Mermentau Basin. Staff spent considerable time manipulating water control structures and pumps to evacuate excess rainwater from the region. This emphasized a need for a spillway and was instrumental in it being accepted as a future Capital Outlay project.

Six thousand five hundred feet of marsh terraces were built in the 5,680 acre Unit 4 to improve waterfowl habitat. Terraces were placed at strategic locations to buffer wave action, reduce water turbidity, and promote the growth of submerged aquatic vegetation.

Approximately one mile of berm/levee was refurbished and the drainage ditch east of Unit 14 was dredged. This action protected the Unit 14 road and the 2,400 acre management unit from

wave erosion and improved water level control within the region.

Work continued on a dedicated dredging project for the reclamation of 170 acres of brackish and salt marsh. Plans are to use a hydraulic dredge to deposit fill in each of three sites ranging in size from 4.7 to 107 acres. Oystergoass will be planted in the salt marsh creation sites and marshhay cordgrass and oystergoass shall be planted in brackish marsh creation sites. Reimbursement for the work will be from the newly established Rockefeller Mitigation Bank.

Controlled burning is conducted on Rockefeller Refuge to remove rough and litter which reduces the chances of unwanted lightning fires; sets back vegetative succession; and promotes the growth of desirable wildlife food plants. Forty percent (30,000 acres) of Rockefeller Refuge was burned during fiscal year 2003-2004. Areas burned included: Units 3, 4, 5, 10, 13, Price Lake, and Unmanaged Tidal Areas.

Waterfowl Program

Rockefeller and New Iberia staff conducted five waterfowl surveys on three coastal refuges, one waterfowl preserve, and four Wildlife Management Areas (WMA) which included: Rockefeller Refuge, State Wildlife Refuge, Marsh Island Refuge, White Lake Preserve, Atchafalaya Delta WMA, Point-aux-Chenes WMA, Salvador WMA, and Pass-a-Loutre WMA.

Fur and Refuge Division biologists completed the ninth year of a statewide mottled duck banding program during fiscal year 2003-2004. Department personnel banded 2,300 mottled ducks this year and 20,025 from 1994-2004.

Alligator Removal and Fur Trapping

A successful nuisance alligator trapping program to remove animals from high human use areas was conducted on Rockefeller Refuge during September 2003. Eight hunters removed 320 alligators in five days. Average size was 7.5 feet.

Four trappers harvested fur bearing animals from Rockefeller Refuge during fiscal year 2003-2004. Eight hundred seventy nutria, five muskrat, one mink, and one otter were harvested. Average price per nutria was \$1.82, muskrats \$1, mink \$3.50, and otter \$70.

Watchable Wildlife Program

Nine helicopter survey days totaling 49.0 hours were used to monitor Louisiana's nesting Bald Eagles. Three hundred fourteen young were produced from 234 active nests during fiscal year 2003-2004. The number of young produced continues to increase, while the average young per active nest and average young per successful nest has remained relatively constant for the past four years. Increasing nesting pairs and stabilized production data indicate a healthy bald eagle population.

The U.S. Fish and Wildlife Service downlisted the bald eagle from endangered to threatened on July 12, 1995. Delisting activities which would remove Bald Eagles from the endangered species list began in July 2003. LDWF is working with federal and state representatives in the Southeastern United States to facilitate the delisting process.

Ten Brown Pelican nesting colonies were active in 2003-2004. Sixteen thousand five hundred one nesting pairs produced 39,021 fledglings. The number of fledglings produced increased 44.6 percent from 2003 to 2004. Nest success was high this year as a result of stable spring/early summer weather patterns. Reproductive success remains high with 292,926 young produced from 1971 to 2004. Brown Pelican nesting was documented on the Chandeleur Islands in 1918. Nesting ceased in Louisiana in 1962. Brown Pelicans were reintroduced into the state in 1968 and began nesting in 1971.

Technical Assistance, Education, and Outreach

Marsh management/marsh enhancement technical expertise was provided for private landowners in the coastal region. Personnel also conducted waterfowl habitat assessments for coastal landowners and waterfowl hunters in southwest Louisiana.

Recreational Use

Marsh enhancement units managed by structural means have proven popular with sports fishermen. Additionally, heavy public usage has placed a strain on boat launch and parking facilities. According to data collected in fiscal year 2003-2004 it was estimated Rockefeller Refuge experienced approximately 116,000 man-days of public use; with approximately 112,500 consumptive use man-days and 3,500 non-consumptive use man-days.



Estuarine Fisheries Program

Rockefeller Refuge continued its fisheries monitoring program in conjunction with various habitat management/restoration strategies. Rockefeller Refuge staff continued stocking Florida-strain largemouth bass to supplement bass populations on the Refuge. In 2004, approximately 214,500 fingerlings were released in fresher areas of the Refuge. In May 2004, staff received an additional 407,400 fry. These were reared in ponds until June; when approximately 204,000 were released into the Atchafalaya Basin, along with 10,000 in the Mermentau River Basin, and 31,400 into Lacassine NWR.

Research and Publications

Cooperative studies conducted at Rockefeller Refuge concerning wildlife and wetlands ecology during fiscal year 2003-2004 include:

- Study of effects of terrace construction on submerged aquatic vegetation and fisheries production (LSU)

- Evaluating latitudinal origin of wintering rails in south west Louisiana (LSU)
- Exponential population growth of the eastern brown pelican following extirpation in Louisiana (Wilson Bulletin)

Other

Work continues on two approved Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) projects entitled "Highway 82 Fresh Water Introduction" and "Rockefeller Refuge Gulf of Mexico Shoreline Stabilization".

Rockefeller Refuge was selected by the USDA-ARS Honeybee Breeding, Genetics, and Physiology Laboratory as an isolated mating station for honeybees four years ago. The Refuge was used in the autumn of 2000 to propagate a stock of honeybees with genetic resistance to parasitic tracheal mites. In the spring of 2002, the Refuge was used extensively to propagate imported Russian honeybees that have genetic resistance to parasitic varroa mites. The program continued in fiscal year 2003-2004.

Coastal Stewardship Operations

Teal season harvest-success on our coastal WMAs this year was almost identical to last year, with hunters harvesting an average of 1.6 birds per hunter effort - legal harvest limit was four birds per hunter. Overall, however, the harvest of teal has decreased almost 20 percent over the last four year record period.

Waterfowl hunter interviews for the 2003-2004 season indicated that total ducks harvested and kill per effort were also essentially the same as the 2002-2003 season. Just as with the teal harvest; however, the harvest of waterfowl during the regular seasons decreased almost 20 percent over the last four years.

Atchafalaya Delta Wildlife Management Area

Several improvements were implemented to assist hunter utilization of the Delta. The shoaled area in front of the houseboat mooring pilings in Campground Pass at Wax Lake Outlet was dredged and the dredged material was used to increase the elevation of the tent-camping sites on the north bank line of Campground Pass. The two trenasses that had been constructed from Breaux's Cut to the Big Island, to improve access for deer hunters, were re-dredged and the walking trail from the Cul-de-Sac at Big Island to the center of the Island was "turtle-backed". With a monetary grant from the federal Coastal Impact Assistance Program, outdoor privies were installed at both the Main Delta and Wax Lake Outlet tent campground areas.

Permits for all available mooring locations were issued for the 2003-2004 season.

A total of 65 houseboat mooring permits were issued at the three mooring locations at the Main and Wax Lake Outlet Deltas.

Based on self-clearing permit data, 539 archery hunter efforts were expended in the harvest of 46 deer (31 bucks and 15 does), yielding a kill per effort of one deer per 12 efforts. Two youth lottery deer hunts were held; a total of 30 youths participated in the hunts and two bucks and eight does were harvested.

During the teal season, some 1,095 hunter-efforts resulted in the

harvest of 1,390 birds, for an average of 1.3 birds per effort. This was almost identical to last year's teal season. During the regular waterfowl season, some 4,870 ducks were harvested via 2,640 hunter efforts, for an average of 1.8 birds per effort. This was over a 25 percent reduction in harvest at the Atchafalaya Delta compared to last year, and the harvest rate (i.e., kill per effort) was the lowest of all WMAs in the Coastal Stewardship Operations Program.

One hundred eighty-one alligators having an average length of 7.0 feet were harvested from the area during the 2003 alligator season. The department received \$3,596 as its share of the revenue from the sale of these animals.

Biloxi Wildlife Management Area

Department and Biloxi Marsh Land Co. officials met and exchanged written correspondence addressing the manner in which houseboats would be allowed to be moored on the WMA and in which department-installed water control structures would be marked as potential navigational hazards.

It was agreed that a copy of all houseboat permits issued would be sent to the Biloxi Marsh Land Co. Further, department personnel marked all exposed water control structures with reflective tape and flagging to minimize the likelihood that they might be hit by the navigating public.

Lake Boeuf Wildlife Management Area

Data collected from self-clearing permit stations indicated that 37 deer hunters utilized the WMA throughout the 2003 archery season, with no deer killed.

Nine alligators, having an average length of 6.3 feet, were harvested from the area during the 2002 alligator season. The department received \$140 as its share of the revenue.

Youth lottery deer hunts were held in November and January. A total of 12 young hunters participated and two deer were shot at, but none were harvested.

Marsh Island Refuge

Canals and bayous that had filled with silt and vegetation by Hurricane Lili were dredged and reopened with departmental equipment.

Construction of the elevated storage/tool shed and replacement of siding on the south side of the main camp (damaged by Hurricane Lili) was completed. A pre-bid conference was held to address the anticipated repairs to the Big Impoundment Levee.

No alligators were harvested from the refuge this year.

Pass-a-Loutre Wildlife Management Area

Department personnel continued to assist the U.S. Fish and Wildlife Service (USFWS) in servicing and downloading an air quality monitoring station on Headquarters Island. The department submitted an annual air quality monitoring report to the USFWS, satisfying one of the requirements for receiving funding (\$5,000 annually) for monitoring and maintaining the air quality sampling equipment.

A boat dock and walkway at the "main tent campground at the reservoir" was built by Westchester Inc. as mitigation for damages from an oil spill in the Mississippi River that occurred about two years ago. Five new oil spills occurred on the area this year, mostly at Enervest Oil Co. facilities, although no significant adverse environmental impact occurred.

A permit was received from the Corps of Engineers that would allow dredging of the mooring areas adjacent to the five tent-campsite areas and the Headquarters canal and mooring area.

The LDNR-sponsored "small-dredge project" in the area of Sawdust Bend was initiated. When completed, the project is slated to build some 55 acres of emergent marsh. A pre-bid conference with prospective contractors was held to review the requirements of the "Delta-wide Crevasse Project" sponsored by the CWPPRA process.

The department's carpenter crew initiated repair/replacement of flooring, bathroom fixtures, etc. The job is slated to require several months to complete.

Three hundred eighty alligators, having an average length of seven feet, were harvested from the area during the 2003 alligator season. The department received \$13,134 as its share of the revenue.

Data collected from self-clearing permit stations indicated that 209 deer hunters utilized the WMA throughout the 2003-2004 archery season. As a result, eight deer were harvested, yielding a kill per effort of one deer per 26 efforts.

During the teal season, some 1,115 hunters harvested 2,525 birds, for an average of 2.3 birds per effort. Although the kill per effort was the same as last year, the number of birds harvested and the actual number of hunters increased by over 40 percent compared to last year. During the regular waterfowl season, some 14,800 ducks were harvested by 4,350 hunter efforts, for an average of 3.4 birds per hunter effort. This amounts to almost a 40 percent increase in waterfowl harvested, compared to last year's harvest. This area also had the best kill per effort when compared to other coastal WMAs.



Pointe-aux-Chenes Wildlife Management Area

The department acquired a lease from the Terrebonne Parish School Board for approximately ten acres of property adjacent to LA Hwy 665 to establish a public tent-camping area. Clearing of the property and preparations of the grounds for tent camping was completed.

The Terrebonne Tidewater Conservation District received approval to dredge approximately 15 linear feet of canal bank along the western side of the Point Farm Unit to use to refurbish the Montegut Flood Protection Levee along the western perimeter of the Farm. A total damage area of two acres was estimated and the District agreed to plant two acres of bottomland hardwood seedling at a department-selected site on the southern end of Point Farm during the winter of 2005.

According to a "survivability report" prepared by T. Baker Smith, Inc., the cypress tree mitigation plantings along the northern perimeter of the Montegut Unit required as mitigation for a previously permitted Discovery Pipeline resulted in only about a 10 percent survival. A decision was made to allow the applicant to purchase the remaining un-met mitigation needs from a mitigation bank, in lieu of re-planting.

The Ducks Unlimited proposed Pointe-aux-Chenes Water Management Unit project has been selected to receive an approximately \$1.0 million grant via the North American Waterfowl Conservation Act. Some 20,000-linear feet of terracing were constructed within the Pointe-aux-Chenes Unit with department personnel and equipment.

Marsh Buggies, Inc. completed a contract to refurbish the Grand Bayou Unit levee that had been debilitated by Hurricane Lili.

Low Land Construction Co. completed construction of two boat launches and a parking lot off Highway 665 into the Grand Bayou Water Management Unit using federal funding via the Coastal Impact Assistance Program. Subsequently, it was also contracted to refurbish the Montegut Water Management Unit levee using funding from the Coastal Impact assistance Program and LDNR's Coastal Restoration Trust Fund. The latter project is about 50 percent complete.

Youth lottery deer hunts were held November 22 and 23, 2003. Two deer were harvested.

During the 2003-2004 archery season, 69 hunter efforts were expended in the harvest of one buck.

Two hundred twenty alligators having an average length of seven feet were harvested from the area during the 2003 alligator season. The department received \$4,113 as its share of the revenue.

During teal season, some 1,560 hunters harvested 2,105 birds, for an average harvest of 1.3 birds per hunter effort. This was about a 50 percent reduction in birds harvested compared to the teal season of last year. During the regular waterfowl season, 17,270 ducks were killed by 7,560 hunters, yielding an average harvest of 2.3 birds per hunter effort. This was an increase in birds harvested of about 20 percent over last year.

Salvador/Timken Wildlife Management Area

Area staff hosted a tour of the Timken Wildlife Management Area for about five members of the New Orleans City Park Improvement Association Board; New Orleans City Park is the surface owner of the Timken WMA. Board members appeared to be please with the way that the department was managing and over-seeing the area.

Area staff resurveyed and posted the northern boundary of the area, resulting in a gain of some 200 linear feet of land for the WMA.

Data collected from self-clearing permit stations indicated that archery hunters expended some 394 efforts throughout the 2003-2004 deer season. As a result, 25 deer (19 bucks and six does) were reported harvested, yielding an effort of one deer for every 11 efforts. Gun hunters expended 151 efforts resulting in the harvest of 14 bucks and four does.

Five hundred and nineteen alligators having an average length of 6.5 feet were harvested from the area during the 2003 alligator season. The department received \$9,217 as its share of the revenue.

During the teal season, 1,140 birds were harvested by 755 hunters, for an average of 1.5 birds per hunter effort. During the regular waterfowl season, some 4,565 hunters harvested 9,175 ducks, for an average of 2.0 birds per hunter effort.

State Wildlife Refuge

Construction of the Natural Resources Conservation Service's (NRCS's) Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA) "Lake Portage Land Bridge Project" was completed this fiscal year. The project involved the filling of a widening pipeline canal with dredged material. During construction, the contractor (Bay West) caused damage to emergent marsh outside of the authorized project work-area and was required to mitigate that damage. As mitigation, a contractor was paid to plant almost 5,000 plugs of smooth cordgrass, wiregrass, and salt marsh grass and to apply fertilizer over the newly planted area.

Furbearer Management

Monitoring Fur Harvest

The 2003-2004 furbearer harvest was monitored by compiling distribution and total harvest data. Each year fur buyers and dealers are required to submit reports providing information on



pelts purchased by species and parish of harvest. Annual audits of all fur dealers provide a record of total pelts by species shipped from Louisiana. River otter and bobcat possession tags provide data on timing and location of all bobcat and otter harvested in the state. These tags are necessary to insure that only Louisiana otter and bobcat are tagged with federal export tags (a federal requirement for out-of-country shipment).

Records available from the License Section indicate a total of 1,432 trapping licenses were sold during the 2003-2004 trapping season. These figures show a slight decrease in trapping licenses sold last season when compared to the previous season (1,589). However, more trapping licenses were sold during the last two years than in years since the 1998-1999 season. Part of this increase may have been a result of the Coastwide Nutria Control Program (CNCP) and significantly higher prices paid for river otter.

A total of 356,429 animals was harvested (all species), up 29,391 from the previous season's total of 327,038. The total value of the 2003-2004 fur harvest to the state's trappers was estimated at \$2,075,807. This was up \$494,596 from the previous season. This increase in harvest and value was directly related to the incentive payment associated with the Coast-wide Nutria Control Program (CNCP).

The 2003-2004 harvest of nutria (332,596) increased by 24,436 from the previous season's total of 308,160. The average nutria pelt price paid to trappers during this past season was \$1.92, an increase of 54 cents from the previous year (\$1.38). However, an additional \$4 was paid for all nutria taken during the CNCP. The total value of the nutria harvest increased from \$1,297,558 to \$1,479,516. The next most valuable furbearer was river otter with trappers receiving an average of \$86 per pelt. A total of 5,713 otter were harvested with a total value of \$491,889. This species has become important to both coastal and upland trappers.

Fur and Alligator Advisory Council

The FAAC continued to work during 2003-2004 towards its two major goals. The first goal of educating the public concerning the role of wildlife utilization in conservation cannot be separated from the second goal of market enhancement for fur and alligator skins and products. FAAC has come to the increased realization that without education of the public to counter misleading animals' rights propaganda, enhancement of markets cannot be accomplished in the long-term. The educational module for teachers paired with the new educational CDs continued to be a great success. Requests for sample skins and programs have been tremendous. The website carried the educational story to a much broader audience of teachers and students. The success of our education program will likely determine the long-term future of markets. If we hope to succeed we must find ways to involve other conservation organization and ways to inform more people while using the same number of dollars.

This fiscal year FAAC continued to concentrate efforts on the U.S. alligator market. The Alligator Retailer Education Program was well received by retailers with requests for more educational programs for their sales staff. This program allows information to be distributed about the sustainable use of alligators, the "marsh to market story", and the difference between alligator and caiman leather.

FAAC also concentrated on solving problems associated with alligators and crocodilians in general, through CITES and USFWS programs and regulations. Progress has been slow but steady.

FAAC has struggled to find new strong and stable markets for Louisiana fur. The international fur market continues to be very dynamic and many internal and external factors affecting buying trends and markets are still present. Russia and Mainland China still hold the brightest future for new and expanded markets. China is catching up with its knowledge base, and dealers are eager to learn about Louisiana furs. FAAC has followed a marketing plan of working in several countries that are gateways to Russia.

Coastwide Nutria Control Program

This program is funded by the Coastal Wetlands Planning, Protection, and Restoration Act (CWPPRA). The objective is to increase the harvest of nutria in order to reduce damage to vegetation. A total of 332,596 nutria tails, worth \$1,330,384 in incentive payments, were collected from 346 participants. One-hundred fourteen participants (33 percent) turned in less than 200 tails, 68 participants (20 percent) turned in between 200 and 499 tails, 43 participants (12 percent) turned in between 500 and 799 tails and 121 participants (35 percent) turned in 800 or more tails. There were 22 parishes represented in the program with harvests ranging from 25 to 86,720 nutria. Approximately 86 percent of the harvest came from the southeast portion of Louisiana. Forty eight percent of the nutria was taken by trapping, 50 percent shooting with a rifle and 2 percent taken with a shotgun. February was the most active month for harvesting nutria (110,627 tails) while November (14,696 tails) was the least active month (see CNCP 2004 Report, CWPPRA Project LA-03b).

Vegetative Damage Caused By Nutria

As a monitoring requirement of the coast wide nutria control program, a coast wide aerial survey was conducted in the spring of 2004 covering the coastal parishes of Louisiana. The total number of sites visited in 2004 was ninety-three of which twelve were new sites in 2004 and eighty-one were previously classified as damaged in the 2003 survey. Three damage sites that had converted to open water in 2003 were not visited during the 2004 survey. Of the 81 sites previously identified as having nutria damage, only 57 were identified as still having visible nutria herbivory impacts and 24 sites were classified as recovered. These sites are extrapolated to determine damage coast wide.

A total of 63,397 acres were impacted by nutria feeding activity coast wide as compared to 82,080 acres coast wide in 2003. This was a significant reduction in the number of acres impacted by nutria. Terrebonne Parish contained 45 percent of the damaged acres (28,976), which was a decrease from 46,954 damaged acres in 2003. Lafourche Parish had a decrease in acreage from 2003 as well, 1,429 acres (2 percent) of damaged marsh in 2004 versus 2,288 acres in 2003. Jefferson Parish had 6,443 acres (10 percent) of damage. Plaquemines accounted for 9,353 acres of damage (15 percent). St. Bernard Parish had 3,881 acres (6 percent) impacted. St. Charles parish had a large

increase of damage with 9,625 acres (15 percent) in 2004 versus 4,748 acres in 2003. Smaller amounts of damage were located in Vermilion, St. Tammany and St. John parishes. Terrebonne, Jefferson, St. Charles and Plaquemines, were the parishes most affected by nutria herbivory.

When compared to 2003 with 82,080 impacted acres, the 2004 survey showed a 22.8 percent decrease in the number of damaged acres. Another significant finding in 2004 survey is only four sites had severe vegetative damage and only one site converted to open water. This is a reduction of 82.5 percent in the amount of severe damage from last year. Over two years, the amount of conversion to open water has been reduced by 98 percent. The CNCP has demonstrated its impact on nutria populations in problem areas of coastal Louisiana by drastically increasing harvests to over 300,000 animals. The most significant finding of the survey was that there was a shift in the severity of damage from moderate and severe damage sites towards more minor damage. The department indicated from the initiation of the program that if the harvest target could be reached and maintained, vegetative recovery might require three to five years. Through time this increase in harvest should result in fewer acres impacted in these coastal

Nutria Meat Marketing

The Nutria Harvest and Wetland Demonstration Project was approved through CWPPRA in 1997. This five year project was initiated in 1998 and was comprised of three major components: 1) plan, develop and conduct various nutria meat marketing activities, 2) conduct a coast wide nutria herbivory survey, and 3) provide incentive payments to trappers and nutria meat processors. The budget established for this project was \$2.1 million. Funding for this program was extended beyond the initial five years, however, the funding for this project was de-authorized by CWPPRA and the project was terminated on October 31, 2003. This discontinuance was mainly due to the initiation of the Coast wide Nutria Control Program.

The department maintains a web site, www.nutria.com that provides information to the public on nutria biology, wetland damage by nutria, the history of nutria in Louisiana, nutria control, fur trapping, and nutria fur. New Iberia personnel update this web site on a regular basis. This website was initially developed with funding from the Nutria Harvest and Wetland Demonstration Project.

The department participated in trade and sport shows with a nutria display and distributed samples of nutria meat such as "nutria snack sticks" and "nutria smoked sausage".

The department continued to contract with Chef Philippe Parola to prepare and serve various dishes during several promotional activities throughout the fiscal year 2003-04 with this funding.

Marsh Management

Division staff continued work on several CWPPRA projects during this period. Staff worked closely with the Natural Resources Conservation Service (NRCS) to develop access routes and a borrow area for the Lake Portage Project on State Wildlife

Refuge. Material was dredged from near Hell Hole and used to back-fill a pipeline canal running from near the gulf shoreline to Vermilion Bay. Dredging and pipeline backfilling was started in February 2003 but was stopped due to the opening of the spring shrimp season. This project was re-started in January of 2004 and was completed in the late spring of 2004.

Staff also worked on four other CWPPRA projects involving coastal wildlife management areas. The concept of the Delta Wide Crevasse Project on Pass A Loutre Wildlife Management Area (WMA) dates back to the early 1990s. Freshwater diversions were created earlier by innovative work on the part of division staff. Working with oil and gas production companies the department created cuts in the ends of location canals allowing river water to flow into adjacent bays and small deltas were quickly formed. This concept was adopted as a CWPPRA project and many other such cuts were made throughout much of the delta. During this period staff worked with the Department of Natural Resources (DNR), National Marine Fisheries Service (NMFS) and Ducks Unlimited to select which old cuts should be cleaned out and where new cuts could be made. This selection process required a number of meetings, ground surveys, and aerial flights with photography. This work should take place during the late summer of 2004. Staff also worked with DNR on the CWPPRA Small Dredge Project, this LDNR-sponsored project in the area of Sawdust Bend on Pass A Loutre WMA was initiated in June 2004 with construction of the containment dikes. This project is projected to build approximately 55 acres of emergent marsh.

Division staff attended meetings concerning design, modeling, and permitting for Castille Pass, Atchafalaya Delta WMA and Raccoon Island Breakwaters, Isle Dernieres Barrier Islands Refuge, both CWPPRA projects. Both of these projects continued with design, permit application and approval process.

Division staff continued to work closely with the Corps of Engineers on annual maintenance dredging of the Atchafalaya River through the Atchafalaya Delta WMA. This required planning and review of specifications during the fall and also included monitoring of activities during the summer. During the fall of 2003 dredge spoil was placed on Long Island. Other work concerning beneficial use of dredge spoil involved Wine Island and the use of spoil to set back plant succession to improve habitat for terns and Black Skimmers while protecting shrub habitat for Brown Pelicans, this project is still pending. This dredging may occur during early spring 2004 depending on funding. Dredging of South Pass on the Pass A Loutre WMA will involve beneficial use of material in the freshwater impoundment and could occur in 2005 depending on funding.

LDWF was awarded a grant from the North American Wetlands Conservation Act to construct a Water Management Unit on the Pointe-aux-Chenes WMA. The 5,000 acre unit is located in the center of the WMA and will be managed to enhance a deteriorated salt marsh that is now 60 percent open water. In 1956 it was 99 percent marsh. The area will be managed for marine organisms and waterfowl by regulating water levels and salinity to reduce turbidity, increase aquatics and improve emergent marsh diversity. Much of the period was spent developing

structure design, operational plan and developing information for the permit application. Several fieldtrips were taken to explain the concept of the unit to federal agencies. Ducks Unlimited is acting as the lead organization for implementation of the grant including grant application, partnering, engineering and bidding the construction job. The permit was issued in early March 2004 and construction is anticipated in the fall of 2004.

Staff worked on design, engineering, construction, and planting of 11 acres of terraces inside the water management unit to be constructed on Pointe-aux-Chenes WMA. These terraces were built with two department marsh excavators working for 60 days and completed and planted in October 2003. A second set of terraces was planned and designed in the late summer of 2003. A grant proposal was submitted to the Gulf of Mexico Foundation for the construction and planting of 3.5 acres of terraces. These



terraces will help to reduce wave energy and turbidity in the unit and encourage the growth of aquatics.

Staff of the Fur and Marsh Management Section conducted several aerial surveys to evaluate conditions on the southeastern end of the Marsh Island Refuge. This area was severely impacted by Hurricane Lili in October 2002 by tidal scour of approximately 600 acres of marsh and several sections of Oyster Bayou were plugged with this scoured marsh. This information was preliminary in planning more intensive ground surveys to determine the extent of restricted flow out the main bayou and its tributaries that drained the impacted marsh. In August of 2003 a permit was secured to clean out the smaller tributaries and LDWF equipment and personnel performed the work. This work was completed in the early spring of 2004. Monitoring continued on the main channel of Oyster Bayou.

Staff also assisted other division personnel with all aspects of mineral management including planning and monitoring of seismic activity, drilling access, production and mitigation on all coastal WMAs and refuges.

Coastal Impact Assistance Program (CIAP)

Work continued on the DNR Interagency Agreement No. 2513-02-01 which provides funding for the "Coastal Impact Assistance Program (CIAP)". This agreement includes seven

tasks, three non-construction projects and four construction projects. The three non-construction projects included; one for Brown Pelican monitoring, one for eagle monitoring, and one for a Louisiana Coastal Workshop for educators. The four construction projects included: 1) Campground Improvement, Atchafalaya Delta WMA (\$59,323), 2) Oyster Lake Terracing, Marsh Island Refuge (\$178,802), 3) Lake Tom North Shoreline Stabilization, Marsh Island Refuge (\$413,875), and 4) Grand Bayou Unit Boat Launch, Pointe-aux-Chenes WMA (\$684,800). Two monitoring projects approved included two years of eagle and pelican surveys (\$133,000). A project involving a Louisiana Coastal Ecology Workshop for educators was funded for two years (\$74,000). Some of the project costs differ from the original estimates due to over and under estimating the actual cost of the projects. Funds were transferred among projects with amendments to the agreement to utilize funding more efficiently.

During fiscal year 2003-2004, New Iberia Fur and Refuge staff continued working on the engineering and design of the one remaining construction project. This project was the Grand Bayou Unit Boat Launch / Pointe-aux-Chenes WMA. The low bid for this project was from Low Land Construction for \$899,970. CIAP funds covered \$684,800 and LDWF contributed the remaining balance of \$215,170. The construction began in January of 2004 and the anticipated completion time is mid-summer of 2004. The Oyster Lake Terracing project constructed 14,500 linear feet of terraces in Oyster Lake at a total cost of \$178,802. The construction phase was completed and accepted on January 7, 2004. These terraces were planted in the spring of 2004. The Campground Improvement / Atchafalaya Delta WMA project was completed and accepted in October 2003 at a final construction cost of \$59,323. The project was constructed with LDWF equipment and personnel. The Coastwide Brown Pelican Survey for 2003-2004 began in March of 2003 and will continue through the fall of 2004. The bald eagle Survey for 2003-2004 began on January 26, 2004 and ended on March 30, 2004. Nine helicopter survey days totaling 49 hours were used to monitor Louisiana's nesting bald eagles. The Louisiana Coastal Ecosystem - A Workshop for Teachers is still ongoing.

Research

The Fur and Marsh Management Section continued research through grants and contracts during this period. In 2003-2004 the section administered several contracts concerning nutria control techniques and vegetative damage caused by nutria. A three-year grant was awarded by the Habitat Section, National Marine Fisheries Service, NOAA. Department contractors included LSU-Coastal Ecology Institute, LSU-Agricultural Center, Wildlife Services, USDA and a state private research contractor. This research included studies to; (1) obtain a better understanding of vegetative damage and why some damaged areas recover and other areas remain damaged or even convert to open water. (2) select plant species and techniques to be used for vegetative restoration of wetlands damaged by nutria. (3) determine why nutria populations in the Chenier Plain (southwestern LA) have declined over the last 20 years but populations in the Deltaic Plain (southeastern LA) have remained large enough to cause serious damaged in some areas. (4) Evaluate an alternative control method for nutria, using a rodenticide, in case the CNCP does not succeed in reduce vegetative damage.

The Fur and Marsh Management Section also monitors marsh conditions on the coastal WMA's and Refuge's. Marsh conditions are surveyed both on the ground and through aerial surveys. These surveys provide indicators of general marsh health, abundance of aquatic vegetation for waterfowl, abundance of furbearers and many other important components of these ecosystems. During 2003-2004 the section personnel began to install new YSI (continuous data recorders) along the coastal refuges and WMAs. These YSI units were maintained on department WMAs and refuges to collect data on salinity and water level.

Fur and Marsh Management personnel also collect data on, wading birds shorebirds that nest and feed on these areas, alligator nest densities and participate in intensive coast wide waterfowl surveys.

Mineral Management Program

The mineral program is responsible for ensuring that mineral activities on all department properties are compatible with the environment, and the Wildlife Management Area/Refuge management goals and objectives. Mineral program staff reviewed and evaluated 85 well location and pipeline projects, and issued/renewed 13 right-of-ways and surface leases during 2003 - 2004. Fees generated from these projects which include mineral royalties, right of ways, surface leases, and seismic fees totaled over 23 million dollars. Additionally, mineral program staff obtained nine Corps of Engineers permits for department projects, issued 84 airboat/marsh buggy permits, and worked with the Office of Conservation to properly remove abandoned wells, pipeline, structures, and facilities.

Habitat Section

The objective of the Habitat Section is to gather and compile data on fish and wildlife resources, determine the requirements for conserving the resources, and provide information and technical assistance to governmental agencies, non-governmental entities, and the public. Data are also gathered on the potential impacts of human activities on the resources. These data and recommendations are provided to planners and decision-makers in advance of execution of projects in order to avoid, reduce or compensate for any environmental damage. The Habitat Section is divided into the five following subunits:

Louisiana Natural Heritage Program (LNHP)

The Natural Heritage Program gathers, compiles and disseminates information on unique, rare, threatened and endangered species, and unique, rare and critical habitat on the state, federal and international level.

LNHP staff reviewed over 2,000 project proposals and wrote some 600 letters in response to proposed public and private projects, assessing possible impacts on rare, threatened, and endangered species and exemplary natural communities. More than 200 field days were spent conducting surveys on individual species and natural communities for updating the computerized database. A total of 892 new or updated Element Occurrence Records (EORs) were entered into the database for non-game, rare, threatened and endangered species showing the location and status of species of special concern in Louisiana.

The LNHP administers federal aid grants for species of special concern through the Endangered Species Act, Section 6 program and participates in the State Wildlife Grants Program (formerly CARA). Section 6 projects included a study of the ringed saw-back turtle, gopher tortoise, gulf sturgeon, bear/human conflicts and a black bear repatriation project, snowy plover surveys and coastal bear hair traps. Projects funded under the State Wildlife Grants Program include breeding bird surveys, marine mammal and sea turtle stranding, Red-cockaded Woodpecker Safe Harbor Program, wading bird inventories, Natural Areas Registry Program, shorebird surveys and a study of native bats. The staff participated in Christmas Bird Counts, Breeding Bird Surveys throughout the state and statewide Louisiana Amphibian Monitoring Program routes.

In 2001 Congress passed legislation to allow for funding of two new programs to help the states in reversing the trend of increasing numbers of species under consideration of being added to the Endangered Species List. The Wildlife Conservation and Restoration Program (WCRP) and the State Wildlife Grants Program (SWG) were the first concrete federal funding efforts provided to the states with the primary objective being the conservation of non-game wildlife and the habitats they depend upon. By agreeing to accept this funding, all states were required to develop or commit to develop and submit a Comprehensive Wildlife Conservation Plan/Strategy (CWCS) by October 1, 2005. The LNHP became the lead in 2004 in the formulation of the CWCS. The purpose of this strategy is to develop a blueprint for guiding LDWF in developing wildlife management actions for all species of wildlife with emphasis on species of conservation concern in Louisiana over the next 20 years.

Statewide Environmental Investigations Program

Statewide Environmental Investigations is authorized under the U.S. Fish and Wildlife Coordination Act and is partially funded by a U.S. Fish and Wildlife Service Grant. Staff is responsible for reviewing and providing comments and mitigation recommendations on all permits from and action of state and Federal environmental regulatory and construction agencies. Staff members reviewed approximately 3,000 state and federal permit applications over the past year. There were 821 written comments issued on permit notices and projects containing mitigation recommendations. In addition to permit review, staff participates in permit site inspections, habitat evaluations and mitigation banking. They also provide technical assistance to the public on wetland issues.

The department works with numerous government agencies in conducting environmental investigations including U.S. Fish and Wildlife Service, National Marine Fisheries Service, Environmental Protection Agency, U.S. Army Corps of Engineers, U.S. Forest Service and the Natural Resources Conservation Service of the United States Department of Agriculture, Federal Highway Administration, Federal Aviation Administration, Farmers Home Administration, Housing and Urban Development, as well as Louisiana Department of Transportation and Development, Louisiana Department of Natural Resources, Louisiana Department of Environmental Quality and Louisiana Department of Culture, Recreation and Tourism.

The section also works with private developers and consultants involved in the permit application process with the above regulatory government bodies.

Louisiana Natural and Scenic Rivers Program

The Scenic Rivers Program is charged with the administration of the Louisiana Natural and Scenic Rivers Act. There are currently approximately 70 streams and/or stream segments in the system including around 2,000 linear miles of Louisiana's streams, rivers and bayous. The Act requires that the department, through the Scenic River Coordinator, administer a permitting system for activities that have potential for significant ecological impact to designated Natural and Scenic Rivers and a system of monitoring, surveillance, investigation and enforcement for the purpose of insuring compliance with the Act. In 2004, 25 Scenic River permit applications were received and 21 Scenic River permits were issued with mitigation requirements. The Scenic Rivers Act and pursuant rules and regulations provide for the development of management plans, stream surveys and enforcement.

Several enforcement actions were initiated in 2004. These included cases of illegal dumping/littering, operating on scenic rivers without permits, illegal timber harvest, reservoir construction and channel realignment. Additionally, cease and desist orders were issued to insure adherence to the Scenic Rivers Act and related rules and regulations. The Scenic Rivers Coordinator, through routine surveillance, post project inspections and response to complaints, insured compliance with permit conditions, utilization of adequate sediment control measures and appropriate clean up and restoration of permitted project sites.

Non-Game Program

Various permits are issued through the Non-game program as well as many other Non-game activities. Nuisance Animal Control permits are issued by the Section to both qualified professionals and to private individuals who are having problems and are deemed capable of taking care of nuisance wildlife problems on their own. In 2004, six Animal Control Operators and Nuisance Animal Control permits were issued. The non-game program is also responsible for issuing several other types of permits, i.e. scientific collecting permits, wildlife rehabilitation permits, and special purpose permits. In 2004, 52 Wildlife Rehabilitator permits and 115 Scientific Collecting permits were issued. Countless calls are acted upon by the Non-game staff relating to injured wildlife. Such calls often require collecting and transporting injured wildlife and/or coordinating such activities with permitted wildlife rehabilitators or the LSU Veterinary School.

The Non-game Program provides technical assistance to governmental agencies, non-governmental organizations and the public and administers the LA statewide Red-cockaded Woodpecker Program.

The non-game staff is also heavily involved with issues related to the Louisiana black bear including issues related to human conflict with bears. In 2004, 109 nuisance black bear problems were acted upon.

The Non-game Program biologists represented the department in the following activities; Partners in Flight (PIF), the Southeast PIF Steering Committee, the West Gulf Coastal Plain Joint Venture for Land-bird, Shorebird and Colonial water-bird Working Groups, Southeastern Association of Fish and Wildlife Agencies/The Wildlife Society (SEAFWA/TWS) Wetlands Wildlife Committee and Non-game and Threatened and Endangered Committees, the Atchafalaya Basin Non-game Committee, Barataria-Terrebonne National Estuary Program (BTNEP) Resident Bird Action Plan Team, the Louisiana Association of Wildlife Rehabilitators and the Louisiana Forestry Association Recreation and Endangered Species Committee.

Geographic Information Systems Program (GIS)

The GIS program has become increasingly important to the mission of the department. The function of this program is to provide mapping and spatial data analysis assistance to the all subdivisions of the department. That assistance includes creating maps and overlays, data entry and manipulation and advice to our professional staff on the application of GIS technology.

The GIS Program was involved in the following projects: designing databases for the forestry section in ArcGIS, editing the wildlife management area (WMA) boundaries, converting the CAD and manual cartography WMA maps to GIS, creating WMA maps with topographic and DOQQ background for sale to the general public, providing GIS training and establishing a GIS council for the department. Also developing maps or overlays of flight lines for identification of marsh habitat types, terrace project on Point Aux Chenes WMA, designing the Scenic River web pages, creating WMA maps for legal resolution of boundaries, and providing GIS software support, creating Oil Lease Maps for Mike Windham, Louisiana/Mississippi Boundary Data for legal section, provided data, conversion and re-projection of data for Biotics, wetland certification maps of Catahoula Lake for RAM-SAR and provide ARCIMS support for general public when they ask for maps at the following site: <http://map.ldeq.org/>

The GIS Coordinator serves on the following committees:

1. Louisiana Geographic Information Systems Council (LGISC)
 - Promoting GIS use and development in Louisiana,
 - Providing a forum for the coordination and cooperation of state GIS efforts,
 - Coordinating acquisition of statewide data sets,
 - Advising state agencies on acquisition and implementation of GIS and related activities,
 - Facilitating the establishment of an infrastructure for net work communication and data exchange among state GIS users.
2. Comprehensive Wildlife Conservation Strategy - provides GIS support and a non wildlife biologist voice
3. Gulf Coast Joint Venture (GCJV) GIS Committee member - The following are the duties of a member:
 - Provide technical review and guidance to the GCJV GIS/RS Analyst in incorporating biological input from other GCJV staff and committees into GIS models that depict priority conservation targets.
 - Provide technical review and guidance to the GCJV GIS/RS Analyst regarding technical aspects of geo-spatial

and remote sensing science (e.g., hardware, software, processing, metadata, modeling, etc.).

- Establish long-term data development goals and standards consistent with GCJV mission, purpose, and objectives.
- Assist the GCJV GIS/RS Analyst in creating and maintaining an inventory of relevant geo-spatial data holdings by GCJV partners.
- Guide the development and maintenance of an information delivery system via Internet FTP and ArcIMS website (www.gcjv.org) to support accomplishments, goals, and objectives of GCJV conservation plans.
- Coordinate otherwise independent geospatial activities among GCJV partners to increase efficiency and effectiveness.
- Determine the training needs of GCJV partners for using spatial data hardware and software applications and provide guidance in meeting the needed training.
- Develop and standardize protocols for data development, formats, and sharing including Quality Assurance/Quality Control procedures.
- Maintain Level 1 FGDC metadata for all datasets.

4. WLF GIS Council - We have started an informal Council to promote GIS at WLF and to develop a GIS department like the other state agencies. Presently GIS is ad hoc at WLF.

MARINE FISHERIES

The Marine Fisheries Division is charged with management of the full range of Louisiana's estuarine and marine resources. Division responsibilities are categorized as Fisheries Management Programs and Habitat Protection Programs. Participation in numerous local, state, regional, national and international committees, task forces and councils provides professional expertise in the development of state and federal regulation, legislation and standards governing the wise use of renewable natural resources.

FISHERIES MANAGEMENT PROGRAMS

Fisheries Management Programs include Shellfish Management, Mollusc Management and Finfish Management. In addition to headquarter operations, division responsibilities are conducted through seven coastal study areas and the Lyle S. St. Amant Marine Laboratory.



Shellfish Management

The Marine Fisheries Division continued its long-term trawl sampling program throughout coastal Louisiana. Fishery biologists collected 2,314 six-foot trawl and 1,677 sixteen-foot trawl samples from both inshore and offshore waters in seven coastal study areas. Data from these samples were used to recommend season frameworks for both the fall and spring inshore and winter territorial sea shrimp seasons. Additionally, these same data were used to recommend season extensions, special seasons, and provide recruitment indices for Gulf menhaden and blue crabs.

Shrimp

Shrimp are this state's most valuable commercial fishery and Louisiana continues to lead the nation in shrimp landings. Louisiana shrimp landings in 2003 totaled approximately 77.6 million pounds (all species combined/heads-off weight) and accounted for \$136.4 million in dockside sales. These figures represent an increase of approximately 14 percent in landings and a decline of 3 percent in dockside value from 2002 levels.

Due to significant differences in patterns of shrimp recruitment, growth and immigration among geographic areas, the Louisiana coast has been divided into three Shrimp Management Zones to better manage the shrimp resource. Shrimp management recommendations are listed below by zone.

Louisiana Shrimp Management Zones

- Zone 1 Mississippi state line to the eastern shore of South Pass of the Mississippi River.
- Zone 2 Eastern shore of South Pass of the Mississippi River to the western shore of Vermilion Bay and Southwest Pass at Marsh Island.
- Zone 3 Western shore of Vermilion Bay and Southwest Pass at Marsh Island to the Texas state line.

Shrimp Management Zone I

2003 - Spring Inshore Shrimp Season

- Zone I closed on July 7, 2003 except for that portion of Mississippi Sound originating at a point along the Mississippi-Louisiana territorial sea boundary at longitude 89° 30' 00" W thence due south to a position at latitude 30° 05' 00" N and longitude 89° 30' 00" W thence southeasterly to the US Coast Guard navigational light off the eastern shore of Three-Mile Pass at latitude 30° 03' 12" N and longitude 89° 21' 30" W thence northeasterly to a position which intersects the menhaden line as described in the Menhaden Rule (LAC 76:VII, 307D) north of Isle au Pitre at latitude 30° 10' 00" W.
- Remainder of Zone I closed on July 25, 2003 except for the open waters of Breton and Chandeleur Sounds which remained open to shrimping.

2003 - Fall Inshore Shrimp Season

- Opened August 18, 2003.
- Closed December 31, 2003.

2004 - Spring Inshore Shrimp Season

- Breton and Chandeleur Sounds closed on March 31, 2004.
- Breton and Chandeleur Sounds reopened on May 14, 2004.
- Remainder of Zone I opened May 24, 2004.

Shrimp Management Zone II

Offshore territorial waters south of the inside/outside shrimp line from the eastern shore of Freshwater Bayou Canal at longitude 92° 18' 33" W to the eastern shore of Belle Pass at latitude 29° 05' 07" N and longitude 90° 13' 30" W closed January 12, 2004.

Offshore territorial waters south of the inside/outside shrimp line and east of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel buoy line to the eastern shore of Freshwater Bayou Canal at longitude 92° 18' 33" W to the eastern shore of Belle Pass at latitude 29° 05' 07" N and longitude 90° 13' 30" W reopened to shrimping April 5, 2004.

Offshore territorial waters south of the inside/outside shrimp line and west of the Atchafalaya River Ship Channel at Eugene Island as delineated by the river channel buoy line to the eastern shore of Vermilion Bay reopened to shrimping on May 14, 2004.

2003 - Spring Inshore Shrimp Season

- Opened May 13, 2003.
- Closed June 20, 2003 from the eastern shore of South Pass of the Mississippi River to the western shore of

Vermilion Bay and Southwest Pass at Marsh Island except for that portion of state inside waters within Timbalier and Terrebonne Bay from a point along the inside/outside shrimp line east of East Timbalier Island at longitude 90°15' 00" W, thence due north to a position at latitude 29°10' 00" N and longitude 90°15' 00" W, thence due west along latitude 29°10' 00" N to the intersection of the Houma Navigational Channel, thence south along eastern edge of the Houma Navigational Channel as delineated by the U. S. Coast Guard Channel red buoy line to a point originating along the inside/outside shrimp line in Cat Island Pass.

- Remainder of Zone II closed on June 28, 2003.

2003 - Fall Inshore Shrimp Season

- Opened August 11, 2003.
- Closed December 16, 2003.

2004 - Spring Inshore Shrimp Season

- Opened May 14, 2004.
- Closed June 16, 2004.

Shrimp Management Zone III

2003 - Spring Inshore Shrimp Season

- Opened May 26, 2003.
- Closed July 7, 2003 except for that portion of the Calcasieu Ship Channel originating at Channel Marker 68 southward to a point originating along the inside/outside shrimp line at Calcasieu Pass and including East Pass from its origin at the Calcasieu Ship Channel to the south end of Calcasieu Lake and West Pass from its origin at the Calcasieu Ship Channel to the south end of West Cove.
- Remainder of Zone III closed on July 14, 2003.

2003 - Fall Inshore Shrimp Season

- Opened August 18, 2003
- Closed December 16, 2003

2004 - Spring Inshore Shrimp Season

- Opened May 31, 2004.
- Closed June 29, 2004 except for that portion of the Calcasieu Ship Channel originating at Channel Marker 68 southward to a point originating along the inside/outside shrimp line at Calcasieu Pass and including East Pass from its origin at the Calcasieu Ship Channel to the

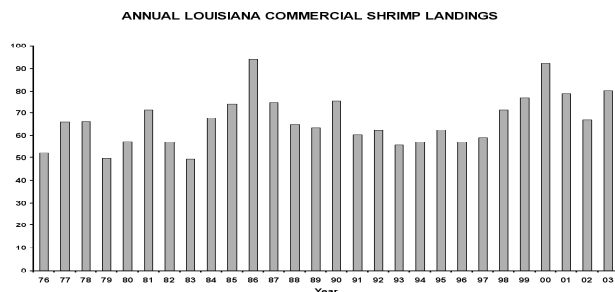


FIGURE 1

south end of Calcasieu Lake and West Pass from its origin at the Calcasieu Ship Channel to the south end of West Cove which closed July 6, 2004.

Annual landings from 1976 to 2003 are depicted in Figure 1. Landings over the past 27 years have ranged from a high of 93.7 million pounds reported in 1986 to 49.4 million pounds landed in 1983. Brown shrimp production in 2003 was greatest during May followed by June and July (*Figure 2*) while white shrimp production peaked in October at 7.4 million pounds. Seabob landings were highest during late fall and winter.

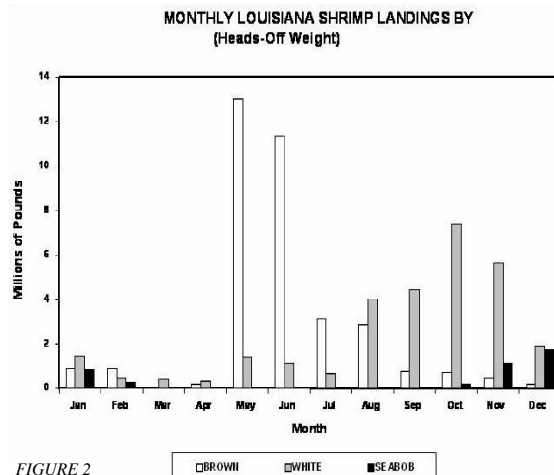


FIGURE 2

Federal Aid Projects

The LDWF administered the distribution of \$7.17 million in economic assistance payments to 3,894 qualified resident and nonresident shrimp fishermen under a federal grant (NOAA/DOC Award No. NA03NMF4520310). Funds also were budgeted for shrimp marketing and promotional activities.

LDWF requested and the National Marine Fisheries Service (NMFS) approved the redirection of \$350,000 from that portion of the grant approved for wild caught shrimp marketing and promotional efforts to funding the Southern Shrimp Alliance (SSA) sponsored shrimp anti-dumping trade actions. The state entered into a Cooperative Endeavor Agreement with the SSA by which these funds were deposited into the Trade Action Trust Account of SSA for expenses associated with litigating the trade actions in the interest of protecting the wild caught shrimp industry.

The objective of the Interjurisdictional Fisheries Project (NOAA/DOC Award No. NA03NMF4070125) was to maintain a coast-wide monitoring program for parameters relevant to important fisheries resources, including both population dynamics and associated hydrological and environmental parameters, and to use information gathered to make rational management decisions. Technical biological and hydrological data gathered from the monitoring program were utilized in establishing seasonal frameworks within the shrimp and oyster fisheries, predicting annual gulf menhaden abundance and providing data for the management of groundfishes and blue crabs. These data have provided estimates of size, density and growth of juvenile penaeid shrimp both on the nursery grounds and staging areas, movement of subadult shrimp from the nursery grounds to stag-

ing areas and provided abilities to correlate juvenile shrimp response and subsequent production to certain hydrologic conditions. Data collected from the monitoring program were crucial in establishing opening and closing dates for shrimp seasons within Louisiana inside and outside territorial waters during the project period. Hydrological and biological data collected on oyster recruitment (spat set) and oyster density and availability estimates were used in formulating management recommendations regarding the oyster season on the public oyster seed grounds and seed reservations. Harvest estimates were determined from boarding report surveys of boats fishing the public seed grounds and seed reservations. These data were compared with annual stock availabilities and previous production estimates calculated during the grant period.

Crabs

Louisiana commercial blue crab landings for 2003 totaled approximately 47.7 million pounds and accounted for \$32.6 million in dock-side sales. Blue crab landings represent a 12 percent decrease from 2002 landings of approximately 54.0 million pounds. A major issue in the fishery has been the low prices associated with increased imports of crabmeat.

Stone crab landings for 2003 were 12,278 pounds valued at \$43,110. Stone crab landings increased approximately 50 percent from the 2002 landings of 8,130 pounds.

The major department activity related to blue crabs in 2003-2004 was removing derelict crab traps from coastal waters. Legislation introduced in 2003 by the department gave the Louisiana Wildlife and Fisheries Commission the authority to establish a derelict crab trap removal program. Two crab trap closures and derelict crab trap cleanups took place in 2004: a shallow water cleanup in upper Terrebonne Bay from February 28 to March 14 and a deep water cleanup in western Vermilion Bay from May 14 to May 22. A total of 6,676 derelict crab traps were collected in upper Terrebonne Bay and 215 volunteers in 90 boats assisted. In the Vermilion Bay cleanup, a total of 218 abandoned crab traps were retrieved.

In addition to the physical removal of derelict traps from the water, a major accomplishment was the broad-based support for the program and cooperative effort between all user groups, including commercial and recreational fishermen, representatives of conservation groups, duck hunters, and fishing guides.

The Louisiana Crab Task Force has continued to meet and address issues that confront the industry. Legislation approved during the spring 2004 legislative session included a crab trap gear license moratorium. The Crab Task Force also began discussions on a limited entry program for the commercial blue crab fishery and impacts of crabmeat imports

Special Bait Dealer Permits

A total of 55 special bait dealer permits were issued to licensed wholesale/retail seafood dealers for the sale of live bait shrimp during 2004. Permitted dealers reported harvesting a total of 1,633,251 live shrimp and 322,114 live Atlantic croaker during the permit period. Dealers also reported a total of 1,057 trips taken during the permit period and sales of 17,883 pounds of

dead shrimp. St. Bernard Parish dealers led all dealers in the number of live shrimp harvested followed by dealers in Cameron, St. Tammany, Jefferson, Plaquemines, Terrebonne and Lafourche Parishes. Dealers in St. Bernard Parish led all others in the number of trips taken while dealers in Jefferson Parish led all in the number of live croaker harvested. Assuming retail values of 20 cents for live shrimp and 25 cents for live croaker, the total dockside value of live shrimp and croaker marketed by permitted bait dealers during the permit period was approximately \$332,665 and \$80,529, respectively. Sales of dead shrimp marketed by permittees contributed an additional \$26,824 in retail sales generating a total estimated retail value of \$430,018 for the permitted live bait fishery in 2004.

Mollusc Management

The Mollusc Program manages the oyster resource on over 1.6 million acres of public seed reservations, public seed grounds, public oyster areas, and public tonging areas. Seed grounds are designated by the Wildlife and Fisheries Commission and include a large continuous area east of the Mississippi River, as well as areas of the Vermilion/Cote Blanche/Atchafalaya Bay system. Seed reservations, public oyster areas, and tonging areas are designated by the legislature. The department manages four seed reservations, including one east of the Mississippi River (Bay Gardene), one in the Barataria Bay system (Hackberry Bay), and two in Terrebonne Parish (Sister Lake and Bay Junop). The Calcasieu Lake Public Oyster Area previously restricted commercial harvest to tonging only. However, a 2004 law change will allow the use of hand



dredges to harvest the oyster resources located in the lake beginning in the 2004-2005 oyster season. Sabine Lake is the only public tonging area in Louisiana, but poor water quality prohibits oyster harvest based on public health concerns. Seed grounds and reservations are managed with the goal of providing seed oysters for transplant onto private oyster leases (*Figure 7*). However, a "Sacking Only Area" exists east of the Mississippi River in portions of Lake Fortuna and Lake Machias for the exclusive harvest of sack-sized oysters. Oyster harvesters use mechanical dredges on public grounds and reservations, and hand dredges with no mechanical assist in the Calcasieu Lake Public Oyster Area. Harvest is restricted to the use of hand tongs in Sabine Lake.

Six additional public grounds were designated in 2000 to be developed for oyster production, these grounds include portions of Barataria Bay, Deep Lake, Lake Felicity, Lake Chien, Lake Tambour, and Lake Mechant. Initial site selection for new reefs in these areas was completed in 2002-2003 by utilizing side-scan sonar technology to analyze water bottoms. Barataria Bay, Lake Chien, Lake Felicity, and Lake Mechant were chosen as locations for reef-building activities in fiscal year 2004 funded by the federal government through the Coastal Impact Assistance Program (CIAP). This project placed roughly 35,000 cubic

yards of crushed concrete and limestone rock on suitable water bottoms in these areas in May/June 2004. Biological monitoring of the new reefs began immediately and will continue through July 2006.

Additional reef building projects were the result of a federal disaster grant secured by LDWF following oyster mortalities associated with Hurricane Lili and Tropical Storm Isidore in September/October 2002. Reef building activities in Hackberry Bay and Sister Lake were planned and carried out in May/June 2004. Over 20,000 cubic yards of cultch material were placed on suitable water bottoms in Hackberry Bay and Sister Lake. Biological monitoring began immediately after cultch planting and will continue through July 2006.

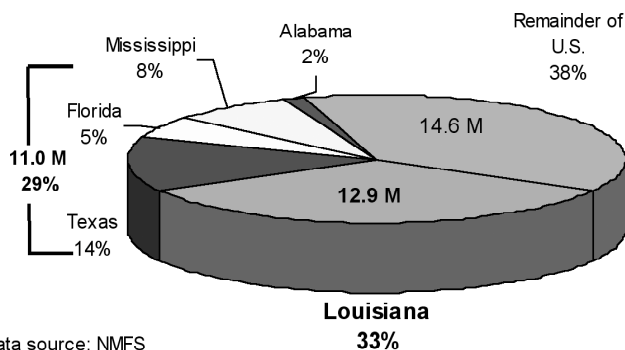
Management of the Louisiana oyster resource is important not only for the oyster industry, but also for the estuarine ecosystem. Oysters provide an economic benefit to the state, and the ecological benefits of oyster reefs are very important as well. Oysters are biomonitors of the overall health of the ecosystem and provide forage and shelter habitat for a variety of fish and invertebrates. Oysters also affect water quality through filter-feeding activities, affect estuarine current patterns, and may provide shoreline stabilization. Because oysters are both economically and ecologically important, wise management of the public oyster resource is critically important to ensure that this valuable species continues to thrive in Louisiana's coastal areas.

Statutory authority directs the department to open the oyster season on Louisiana public seed grounds on the first Wednesday following Labor Day and close these areas by April 1 of each year. However, the Louisiana Wildlife and Fisheries Commission is authorized to extend the season to May 15 provided sufficient stocks are available. The Secretary of the LDWF may close seasons on an emergency basis if oyster mortality occurs or delay the season or close areas where significant spat catch has occurred with good probability of survival, or if excessive amounts of shell in seed oyster loads occur. Management practices often use rotational openings of the four Oyster Seed Reservations in alternating years.

Management of the public oyster grounds, reservations, public oyster areas, and tonging areas relies heavily upon data gathered through the annual monitoring program. This program provides quantitative and qualitative data on oyster populations and other reef-associated animals. Approximately 190 square-meter samples are collected each July and over 150 dredge samples are collected from March through October. Square-meter data is collected using SCUBA and the data are used to measure the annual oyster stock size and for yearly season recommendations by the department. Dredge data are used to monitor the overall health of the oyster resource during the year and to assess recruitment of new age classes of oysters into the population. Field biologists also gather hydrological data on public oyster areas and develop harvest and effort estimates by conducting boarding report surveys of oyster boats.

Unequaled in oyster production over recent years, Louisiana consistently produces one of the most abundant and valuable oyster resources in the nation. Averaging nearly 13 million pounds per

Average 1997 - 2003 Oyster Landings
(all species combined, pounds of meat)



Data source: NMFS

FIGURE 3

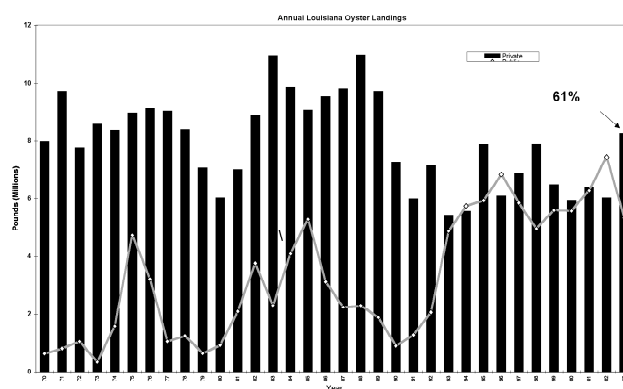


FIGURE 4

year, Louisiana regularly accounts for over 50 percent of all Gulf of Mexico oysters, and was responsible for 33 percent of all oysters landed in the United States from 1997 to 2003 (Figure 3). The importance of the oyster resource to Louisiana's economy is evident as commercial landings had a dockside value of over \$33 million in 2003.

Oyster landings in Louisiana are divided between harvest from public oyster areas and private oyster leases. Oyster season on the public grounds generally runs from September to April, but may extend through May only after approval by the Louisiana Wildlife and Fisheries Commission. Historically, landings from private leases comprised 60 to 80 percent of total Louisiana oyster landings, and 2003 landings data showed that 61 percent of all oysters landed in Louisiana came from private leases (Figure 4). Although the bulk of recent landings have come from private leases, landings from public grounds continue to be strong as harvest during the 2003-2004 season topped 4.6 million pounds of oyster meat (Table 1).

The majority of available public oyster stocks are located east of the Mississippi River and that area of the state is responsible for the bulk of the harvest. This area also provides large amounts of seed for transplant to leases. Coastal Study Areas I and II combined for over 1.7 million sacks of available market (sack) oysters for the 2003-2004 season, and over 400,000 of those sacks were harvested by the oyster industry (Table 2).

Table 1. Louisiana seasonal oyster landings by month from public oyster areas as determined by trip-ticket data.

Month	1999/2000	2000/2001	2001/2002	2002/2003	2003/2004
September	1,126,896	488,194	717,419	783,536	1,202,547
October	976,592	861,975	1,242,239	1,060,866	1,006,703
November	750,452	494,932	1,092,515	1,020,610	236,588
December	859,376	600,950	1,174,405	931,101	426,647
January	677,674	634,542	1,105,325	919,523	380,070
February	793,568	598,025	1,052,718	633,552	513,695
March	192,970	916,346	992,682	685,794	603,250
April	742,953	72,684	408,325	156,813	109,505
May	105,480	195,006	19,688	136	47,380
June	10,087	3,351	38,581	440	35,637
July	6,082	3,151	35,333	1,093	32,848
August	12,397	8,553	1,760	81,211	31,955
Total	6,254,528	4,877,710	7,880,991	6,274,676	4,628,650

At the request of the Louisiana oyster industry and the Louisiana Oyster Task Force, three new areas were added to the Lake Borgne Public Oyster Seed Ground on January 8, 2004. LDWF Marine Fisheries' biologists confirmed through sampling efforts that harvestable quantities of oysters existed and the new areas were opened to harvest on January 12, 2004. Oyster fishermen heavily used the nearly 33,000 additional acres and harvested 34,372 sacks of oysters for market and 20,645 barrels of seed oysters for transplant to leases between January 12, 2004 and April 15, 2004. Using a modest dockside sack price of \$15 per sack, the additional sack harvest made available to fishermen in the new Lake Borgne area during the last four months of the 2003-2004 oyster season was valued at approximately \$515,000.

Table 2. Oyster availability and harvest in Louisiana's public oyster areas for 2003-2004 season.

Area	Seed Oyster Availability (Barrels)	Sack Oyster Availability (Sacks)	Seed Oysters Harvested (Barrels)	Sack Oysters Harvested (Sacks)
Coastal Study Area I (north of MRGO)	286,182	581,702	39,085	137,261
Coastal Study Area II (south of MRGO)	799,454	1,134,036	313,116	286,963
Coastal Study Area III*	82.5	1,649.4	7,254	29,287
Bay Junop/Sister Lake	141,494	370,725	11,840	107,347
Vermilion Bay	NA	NA	NA	NA
Calcasieu Lake	265,333	1,169,997	NA	18,196

*Coastal Study Area III consisted of both Hackberry Bay Public Oyster Seed Ground and the Little Lake Designated Temporary Natural Reef during the 2003-2004 oyster season. Oyster stock availability was assessed in Hackberry Bay only prior to the opening of the 2003-2004 oyster season, but harvest was allowed in both Hackberry Bay and Little Lake. Thus, the amount of harvest exceeded the estimated stock availability for Coastal Study Area III for the 2003-2004 oyster season.

Table 3. 2003-2004 Oyster Season Dates

Public Oyster Area	Season Opening	Season Closure
Bay Gardene Seed Reservation	September 3, 2003	April 1, 2004
Little Lake Designated Temporary Natural Reef	September 3, 2003	April 1, 2004
Primary Seed Grounds east of the MS River (Coastal Study Areas I and II)	September 10, 2003	April 1, 2004
Hackberry Bay Seed Reservation	September 10, 2003	April 1, 2004
Bay Junop Seed Reservation	September 10, 2003	September 16, 2003
Sister Lake Seed Reservation	September 10, 2003	October 10, 2003
Calcasieu Lake Public Tonging Area	October 15, 2003	April 30, 2004

Calcasieu Lake also holds large oyster stocks, but frequent closures by the Department of Health and Hospitals (DHH) based on river stage (Calcasieu River) can limit harvests. During the 2003/2004 season in Calcasieu Lake, health concerns resulted in 27 days where the entire lake was closed to oyster harvesting and 73 days where at least a portion of the lake was closed. Despite public health-related closures, oyster harvest yielded over 18,000 sacks from Calcasieu Lake during the 2003-2004 season (Table 2).

Oyster Leasing

The moratorium on the issuance of new oyster leases, at the request of Louisiana Department of Natural Resources (LDNR), remained in affect throughout fiscal year 2003-2004. The moratorium was requested in order to reduce the state's liability related to coastal restoration efforts. This moratorium does not affect lease renewals and 468 renewal applications were processed.

The Oyster Lease Survey Section continues to maintain a website, which provides information to the public about oyster leasing in Louisiana. This website contains a searchable Geographic Information System (GIS) database of current leases, landings and harvest statistics, and recent news articles about oysters. The website has had 49,707 hits since it was developed and placed on the web in March of 1998, and is available at: <http://oyster-web.dnr.state.la.us/oyster>.

Finfish Management Program

The primary objective of the finfish program is to make rational recommendations for the management of coastal finfish stocks based on a database of scientific information. The information in the database is collected through fishery independent and fishery dependent sampling. These programs are cooperative, with NMFS and the Gulf States Marine Fisheries Commission. The fishery independent monitoring program is an ongoing collection of data by LDWF biologists in the field conducting surveys designed to sample coastal waters in an objective manner. Such surveys collect information based on geographic ranges independent of commercial or recreational fishing operations. The Marine Fisheries Division fishery dependent monitoring program collects information from fishers, processors and observers based on methods developed by NMFS for similar programs.

Fishery Independent Monitoring

A comprehensive monitoring program was developed in 1985 to protect or enhance these valuable resources by providing infor-

mation regarding the status of fish stocks that occur in the coastal waters of Louisiana at some time during their life cycle. Three gear types are used coast wide to sample various year classes of estuarine dependent fish.

A bag seine is used to sample young of the year and provide information on growth and movement. A gill net is used to sample juvenile, sub-adult and adult fish and provide information on relative abundance, year class strength, movement and gonadal condition. A trammel net is used to provide information on relative abundance, standing crop and movement. Gill net samples are collected semi-monthly from April through September, and monthly from October through March using a strike net technique. The gill nets are set in a crescent shape open towards the shoreline and then circled several times by the sampling boat, driving those animals present into the net. Trammel net samples are taken monthly from October through March. Seine samples are taken monthly from January through August, and semi-monthly from September through December. Hydrological readings (conductivity, salinity, and water temperature) collected with each biological sample, as are wind direction and speed. Samples are collected at specific locations arranged in such a manner so as to cover the beach, mid-marsh and upper marsh areas of all major bay systems throughout coastal Louisiana. The catch and hydrological information is summarized for each Coastal Study Area on a monthly basis to give the resource managers information as to the current condition of the resource. The pertinent life history information for the important species is also used in developing analytical and predictive models. During the fiscal year of 2002-2003, 695 (99 percent) seine samples, 810 (100 percent) gill net samples, and 246 (100 percent) trammel net samples were completed for a 99 percent completion rate. Management recommendations based upon these observations are listed below.

2003-2004 FINFISH MANAGEMENT RECOMMENDATIONS

July 2003

- Open commercial Large Coastal Shark second semi-annual season on the 1st at 12:01 am.
- Open commercial king mackerel season on the 1st at 12:01 am.

August 2003

- Close of spring commercial red snapper season on the 7th at noon.

September 2003

- Close of commercial Large Coastal Shark second semi-annual season on the 15th at 11:30 pm.
- Close of commercial king mackerel season on the 24th at noon.

October 2003

- Close of recreational red snapper season on the 31st at midnight.
- Open fall commercial Red Snapper season on the 1st at noon for the first 10 days of each month.

December 2003

- Close of commercial red snapper season on the 8th at noon.

January 2004

- Set 2004 Red Snapper recreational season.

- Set 2004 Red Snapper commercial season.
- Set 2004 King Mackerel commercial season.
- Open commercial Large Coastal Shark first semi-annual season on the 1st at 12:01 am.

February 2004

- Present 2004 stock assessments for Mullet, Black Drum, Flounder, and Sheepshead.
- Open commercial Red Snapper season on the 1st at noon for the first 10 days of each month.

April 2004

- Close of commercial and recreational shark fishing until June 30th.
- Open recreational Red Snapper season on the 21st at 12:01 am.

Fishery Dependent Monitoring

The value of commercial landings in Louisiana exceeded \$294 million (*Figure 5*) in 2003, the ninth highest since 1990. The department continues to collect commercial statistics through the Trip Ticket Program that was implemented in 1999.

Through this program, commercial landings data are collected on a trip basis from wholesale/retail seafood dealers, crab shedders and commercial fishermen holding fresh products licenses. There were over 308,000 commercial fishing trips reported in 2003 producing nearly 1.2 billion pounds of seafood (*Table 4*). Starting in May 2000 an electronic trip ticket program was developed and made available to dealers. Roughly, 85 dealers to date have taken advantage of the computerized program and submit their trip ticket data to the department via the internet. Trip ticket information has been used to enhance the accuracy of stock assessments conducted by state and federal fishery management agencies.

Along with the collection of commercial landings data, the department also conducts trip interviews of commercial fishermen. Biologists interview commercial fishermen to gather detailed information about a specific fishing trip. The federally funded program focuses on species of greatest state and federal interest.

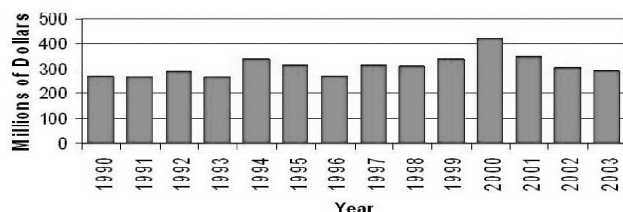
The department, in conjunction with other states along the Gulf of Mexico and the National Marine Fisheries Service, began a new program in 2002 for the collection of biostatistical information. Biostatistical samples such as otoliths, used to determine a fish's age, are collected from both the commercial and recreational fishery. Otoliths are sectioned and read by department personnel to determine a fish's age much like reading the rings of a tree. Over 6,600 otoliths were collected during 2003-2004 in Louisiana. The program will continue to improve the information used in stock assessments and improve the accuracy of the results.

Over 4.2 million marine recreational fishing trips were taken by approximately 1.0 million anglers in 2003 (*Figure 6*). Recreational trips have been on a general rise since 1990. About 14.8 million spotted seatrout and 5.7 million red drum were caught in Louisiana in 2003.

Southwick Associates (2002), using data collected for the "2001 National Survey of Fishing, Hunting and Wildlife-Associated

Recreation" (U.S. Department of the Interior, 2002), estimated that Louisiana saltwater anglers (resident and non-resident) spent approximately \$410 million in 2001 for fishing trip expenses, equipment, and other expenses, with a total economic impact in Louisiana's economy of approximately \$746 million. They also estimated that this supported approximately 7,800 jobs in the state.

Marine Commercial Landings Dockside Value Louisiana 1990-2003



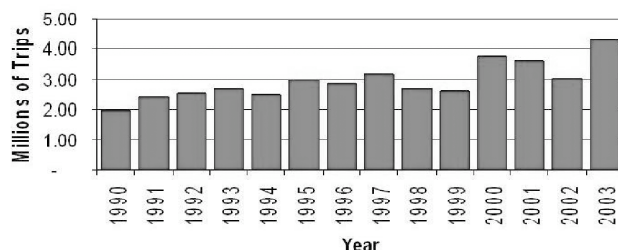
Source: National Marine Fisheries Service, 2004

FIGURE 5

Table 4. 2003 Marine Commercial Landings.

Species	Landings(lbs)	Value(\$)
Crab	48,079,708	33,648,193
Freshwater Fish	11,222,284	3,540,912
Menhaden	953,713,530	34,464,432
Oyster	13,609,838	33,375,237
Saltwater Fish	20,859,824	25,335,969
Shrimp	126,253,448	136,433,335

Marine Recreational Fishing Trips Louisiana 1990-2003



Source: National Marine Fisheries Service, 2004

FIGURE 6

Finfish Stock Assessments

Division personnel updated stock assessments for black drum, mullet, southern flounder and sheepshead in 2003-2004.

Lyle S. St. Amant Marine Biological Research Laboratory

The Marine Laboratory's primary mission is to conduct the research required to manage Louisiana's marine fisheries. The laboratory is made available for the use of other department and non-department entities engaged in fisheries management, enforcement, coastal restoration, marine education, and is also the headquarters of Coastal Study Area III in the Barataria Bay estuarine system. The Enforcement Division routinely used the laboratory as a base of operations, and part of the marine training of Enforcement cadets is conducted at the laboratory each

spring. Several LSU, ULL, and Nicholls State University researchers make use of laboratory facilities. The department's Education Section conducts a teacher workshop (Wetshop) at the laboratory each summer. This fiscal year the laboratory again hosted a session of the Education Section's "Becoming an Outdoors Woman" (Marine Fishing). The marine laboratory also supports the monitoring of the Grand Isle Sulphur Mine Reef for the Louisiana Artificial Reef Program.

Mercury Sampling Projects

DEQ Project

The Louisiana Department of Environmental Quality in May 2002 requested the services of the Louisiana Department of Wildlife and Fisheries (LDWF) to collect samples to analyze for mercury content in marine fish from the Gulf of Mexico. This was necessary due to the absence of data on mercury in marine fishes. Because of the significant harvest of marine fishes for consumption by recreational and commercial fishermen of Louisiana, there are potential impacts on the health of the citizens of Louisiana and the United States. The LDWF provided samples of each of the following fish from each of three coastal zones as follows: Dolphin (fish), Tuna (yellow, blue, or black-fin), Greater Amberjack, Red Snapper, Cobia, Grouper (any species), and King Mackerel. The three coastal zones are: 1West (National Marine Fisheries Service (NMFS) Gulf offshore zones 16 and 17), 2Central (NMFS Gulf offshore zones 14 and 15), and 3East (NMFS Gulf offshore zones 11 and 12).

NMFS Project

LDWF has been contracted by NMFS National Seafood Inspection Laboratory (NSIL) to conduct field sampling in the Gulf of Mexico south of Grand Isle, Louisiana as part of the research conducted under the Synoptic Survey of Total Mercury in Recreational Finfish of the Gulf of Mexico project. Samples from this work will be analyzed by the NSIL. The following is a listing of the species to be sampled: gray triggerfish, gag, red snapper, lane snapper, gray snapper, vermillion snapper, and greater amberjack. LDWF sampled by hook and line, spearfishing, traps, and other methods off operational and abandoned oil and gas drilling rigs south of Grand Isle, LA in the Gulf of Mexico. The work was conducted between May 2003 and April 30, 2004.

Age and Growth Laboratory

To increase accuracy of stock assessments, the division instituted an extensive, long-term project for obtaining age, growth, and fecundity data on important marine finfish. The major research project on marine finfish conducted at the laboratory during the 2003-2004 fiscal year was collecting these data for age structured stock assessments of black drum, gray snapper, red drum, sheepshead, southern flounder, spotted seatrout, and striped mullet. Federal funding for this project was provided through a US Fish and Wildlife Service, Sport Fish Restoration grant (see "Federal Aid in Sport Fish Restoration" below). Personnel obtained fish measurements and otoliths (ear bones) by fishery independent sampling and by sampling the commercial and recreational fisheries. Otoliths were removed from the fishes, sectioned, and examined for annular rings (indicators of age). Computer image analysis technology was used in otolith interpretation. Cooperation continued with Louisiana State

University's Coastal Fisheries Institute (LSUCFI). The Institute continued to provide consultation, and verification of the accuracy of the Laboratory's aging techniques. Institute researchers also investigated new techniques in otolith science and taught those techniques to Laboratory personnel. During 2003 age analysis was completed on 500 black drum, 100 gray snapper, 1,000 red drum, 500 sheepshead, 1,000 spotted seatrout, and 500 striped mullet.

Federal Aid in Sport Fish Restoration

The Federal Aid in Sport Fish Restoration Act was created to fund restoration efforts for the benefit of fish, wildlife and the American people. Appropriate State agencies are the only entities eligible to receive grant funds. During 2003-2004 three research projects were funded with these funds:

Stock Assessment of Louisiana's Important Marine Finfishes

High quality data on the stock assessment for various species are essential for making management decisions. This project determined the spawning ratio of the major recreational saltwater finfish in order to comply with legislative mandates that regulatory action be taken when the Spawning Potential Ratio (SPR) falls below 30 percent. The goal was to ensure that the stocks of these finfish are not overfished. The spawning potential ratio was determined using age, growth and fecundity data. The LSUCFI assisted with the analysis of samples. LDWF sampling crews obtained otoliths from selected fish. Additional work addressed age and growth and reproductive biology of selected finfishes to support stock assessment efforts.

Identifying Essential Fish Habitat in Barataria Bay

This project describes Essential Fish Habitat (EFH) using sidescan sonar, split beam hydroacoustics and stable isotope techniques, to identify essential fish habitat in Barataria Bay and quantify its value to important sport fish species. These techniques yield data to address protection and conservation of habitats important to marine, estuarine and anadromous finfish. This ongoing project is a partnership project between LDWF and LSUCFI. It will identify habitat use by juveniles by sampling tissue and examining differences in isotopic composition. These data are being integrated together to provide marine fisheries managers with habitat use by various fish species.

Evaluating Sport Fish Use of Created Wetlands in the Atchafalaya Delta

The Coastal Wetlands Planning, Protection and Restoration Act provided funding to restore wetlands in the delta. Dredge spoil from the River was used to create new wetland habitat. This project examined the suitability of this habitat for sport fish production. These data will be used in future planning efforts to optimize the creation of habitat for sport fish. The project will also evaluate potential created wetland sites that could be altered to increase use by fish and fishermen.

The Louisiana Artificial Reef Program

The Louisiana Artificial Reef Program (LARP) was founded in 1986 through the cooperative efforts of the LSUCFI and the LDWF. Resultant legislation called for the development of a State Artificial Reef Plan and provided for an Artificial Reef Program in Louisiana. Act 100 of the 1986 Legislature established that LDWF would operate the Program with logistical

support from LSU. CFI and LDWF produced a plan in the fall of 1986 that was accepted by the Louisiana Legislature. The plan outlined the siting, permitting and monitoring requirements of the program.

LARP was established to use obsolete oil and gas platforms to provide habitat for a multitude of Louisiana's coastal fishes. Nineteen obsolete oil platforms were installed as artificial reefs during the 2003-2004 calendar year. Four of these platforms were damaged during Hurricane Lili in October of 2002. After plugging and abandoning the wells and cleaning the platforms of excess hydrocarbons and hazardous materials the platforms were converted into artificial reefs on location. Federal law and international treaty require oil exploration companies to remove these platforms one year after production ceases. LARP has provided an opportunity for oil companies to contribute to maintenance of fisheries habitat. Since its inception, a total of thirty-nine petroleum and other companies have participated in the offshore program and donated the jackets of 136 oil and gas platforms, 40 Armored Personnel Carriers (APCs), and one offshore tug structure which were installed at select locations as artificial reefs. In addition the reef program also developed fourteen inshore reefs, primarily low profile reefs composed of shell and limestone. LDWF constructed eight reefs and six others were associated with public conservation groups. In working with one of these groups the department constructed four reefs using reef balls. These reefs have been deployed successfully in tropical and oceanic environments but this was the first attempt to deploy in an estuarine setting.

In June 2004 the department deployed its first deep-water reef as part of its deep-water reef program. The structure, located in South Pass Block 89, approximately 15 miles south of the mouth of the Mississippi River, was previously owned by Marathon. The reefs are in water depths in excess of 400 ft. This water depth was chosen to minimize the impacts on the shrimp fishery. It has been reported that less than 1 percent of the shrimping activity takes place in these water depths. In addition these platforms are very difficult and expensive to remove. The partial removal preserves the hard bottom habitat and maintains fishing opportunities, and the oil and gas industry saves money on decommissioning the platforms.

Habitat Protection Programs

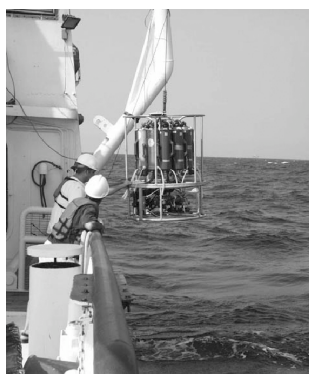
Habitat Protection Programs include: the Southeast Area Monitoring and Assessment Program (SEAMAP), Hydrographic Monitoring, Monitoring for Environmental Perturbations, Oil Spills and Hazardous Materials, Caernarvon Freshwater Diversion Monitoring, Seismic, and Coastal Wetlands Protection.

Southeast Area Monitoring and Assessment Program

The Southeast Area Monitoring and Assessment Program (SEAMAP) is a cooperative state/federal/university program for the collecting, managing and disseminating fishery-independent biological and environmental data and information in the southeastern United States. Fishery-independent data are those collected by fisheries scientists, rather than fishermen. SEAMAP collects data on fish stocks that are managed jointly by the states and federal government, and conducts a variety of data collec-

tion activities including a Fall Shrimp/Groundfish Survey, Spring Plankton Survey, Reef Fish Survey, Summer Shrimp/Groundfish Survey, Fall Plankton Survey and other plankton and environmental surveys.

Off Louisiana, the department collects samples between Southwest Pass of the Mississippi River and Pointe au Fer, and out to the 120-foot depth contour. Louisiana SEAMAP activities include summer (July), autumn (October) and winter (December) trawl surveys that also collect zooplankton and environmental resource data. Biological samples are collected using a SEAMAP-standard 40-ft trawl to collect juvenile and adult animals. Each trawl station is sampled once during daylight hours and once at night to measure the different animal communities that are present in a daily cycle. Plankton nets are used to sample early life history stages (eggs and larvae) of marine environmental data are collected at all stations.



Data from all sample cruises, including real-time shrimp and red snapper data from the summer and fall cruises, respectively, were entered, verified, and uploaded to the SEAMAP data management system. SEAMAP data are available by request, as are the various publications of the SEAMAP program including environmental and biological atlases of the Gulf of Mexico for each year from 1983 through the

present. More information about SEAMAP is available at the Gulf States Marine Fisheries Commission website: <http://www.gsmfc.org/>.

Hydrographic Monitoring

The department began collecting constant records of salinity, water temperature, and tide level in 1958. This program continued in 2003, cooperatively between LDWF and the U.S. Geological Survey. Data are collected from 15 stations located from the Pearl River to Calcasieu Pass; details are shown below (Table 5.)

Once processed, the data are used to support fishery management by, for example, determining how much suitable area of brown shrimp nursery grounds are available each year and setting season opening dates. Field data are collected by USGS, and finished data are provided to the department. All sites collect data in near real-time (4 hour lag), and the data are transmitted via satellite from the instrument in the field to the USGS office in Baton Rouge and downloaded to the department's database via the Internet. Both internal and external data requests are filled from this database. Data from these monitoring stations can be viewed by visiting the department's website: <http://www.wlf.state.la.us/apps/netgear/index.asp?cn=lawlf&pid=884>.

Monitoring the Effects of Environmental Perturbations

Assessing the effects of tropical storms on fisheries LDWF found that in general, both brown and white shrimp catch per effort experienced sharp declines immediately following each

Table 5. Data collection stations

LDWF#	USGS#	STATION NAME
105	0738023365	Bayou Rigolets near Slidell
106	3003010890628	Chandeleur Sound at Door Point
112	07374526	Black Bay near Snake Island, Point-a-la-Hache, LA
117	3007220891501	Mississippi Sound at Grand Pass
315	073802515	Barataria Pass East of Grand Isle
317	07380251	Barataria Bay North of Grand Isle
320	07380335	Little Lake near Cutoff
321	07380340	Tennessee Canal near Cutoff
338	073802512	Hackberry Bay NW of Grand Isle
417	073813498	Caillou Bay SW of Cocodrie
518	07381349	Caillou (Sister) Lake SW of Dulac
622	07387040	Vermilion Bay near Cypremont Pt.
623	07387050	Vermilion Bay at Bayou Fearman
730	08017095	North Calcasieu Lake near Hackberry
731	08017118	Calcasieu River near Cameron
732	08017044	Calcasieu River at the I-10 Bridge

storm but quickly increased to comparatively high levels in the weeks following each storm. Higher catch efforts of white shrimp were especially evident following Tropical Storm Isidore and Hurricane Lili. Storm surges were likely responsible for the additional recruitment of smaller juveniles as evidenced by the general declines in mean white shrimp sizes following each storm.

LDWF found that when compared to oyster mortalities related to heavy rainfall or strong storm events in past years, mortalities following Hurricanes Isidore and Lili appear to be minimal. Hurricane Andrew resulted in mortalities from 25 percent to 100 percent in some areas, and required extensive reef cleaning and reef building to assist natural recovery (Dugas and Lavergne 1997). By comparison, mortalities following Isidore and Lili were very low and generally less than 40 percent. Although reductions in available seed and sack oysters may occur in the coming one to two seasons as a result of these recent mortalities, sufficient resource survived on the public grounds to provide broodstock for reproduction and growth of affected oyster populations.

Average salinity and average percent mortality data show minimal effects on Louisiana's estuarine areas from tropical storms Bertha and Hanna. Oyster mortalities decreased following Bertha and, although the rose slightly on public grounds east of the Mississippi River, they remained less than 5 percent. Slight changes in salinity did occur following the storms, but the changes were small enough on a biological scale not to have affected the oyster resource on the public grounds. Based on the available data, tropical storms Bertha Hanna is not have a significant impact on the Louisiana public oyster resource east of the Mississippi River and in CSA VI.

In finfish, LDWF found that recreational harvest and effort can be used as an indicator of how the active tropical storm season of 2002 may have impacted Louisiana. Table 1 displays the 2002 harvest, effort (recreational fishing trips taken in Louisiana), and CPUE (harvest per trip) of spotted seatrout (the number one species harvested in Louisiana by number) compared the five most recent years (1997 - 2001); Waves 4 (July and August) and 5 (September and October). Recreational harvest was down 873,603 fish from 2001 and ranked fourth in comparison to the years examined. Trips taken were also down by 216,683 trips when compared to 2001; but ranked third overall. CPUE ranked 2002 second to last when compared to the previous five years. When comparing 2002 to the last two years (2000 and 2001) we can notice a decrease in harvest, trips, and CPUE.

Environmental or climatological events are rarely isolated to a time frame suitable for analysis. In the case of hypoxia, by the time LDWF began this data collection effort in 1998, fishermen in the Gulf had already initiated responses to the increasing size of the zone. Patterns of fishing between 1998-2002 indicated shrimping in nearshore areas or well offshore; none in the middle depths where hypoxic conditions usually were most prevalent.

The final report for this project was completed and submitted to NOAA in the fall of 2003. Presentations of this data were made throughout the year to fisheries management groups, fisheries economic groups, and state and regional hypoxia task force meetings.

National Coastal Assessment (Coastal 2000)

The department participated in the EPA National Coastal Assessment (formerly known as the Coastal 2000 program). This year covered the third sampling season of the five-year assessment. departmental personnel sampled 50 randomly generated sites in coastal Louisiana for water quality, fish tissue and sediment samples. The sampling period was from July 15 to September 15, 2003 and the samples were divided spatially into Coastal Study Areas, with their field biologists actually sampling.

Most samples were sent back to EPA to be analyzed in contract labs, while chlorophyll, total suspended solids and sediment grain size were analyzed in the department coastal ecology laboratory. Those samples sent away were water column nutrients, sediment metals, hydrocarbon, toxicity and total organic carbon, and fish tissue for analysis for hydrocarbons. Data from these analyses will be used in a comparative assessment of the health of the Gulf of Mexico waters, based on the estuary inputs from all of the Gulf Coast states. The current report, "National Coastal Condition Report II", is being reviewed now and is available at http://www.epa.gov/owow/oceans/nccr2/Chapt5_Gulf.pdf.

Oil Spills and Hazardous Materials

The department's Oil Spill Task Force continued in 2003-2004 to develop and implement plans to protect and restore the State's wildlife, fishery, and habitat resources from the adverse effects of oil spills. With other state and federal trustees, department

representatives continued to develop a pilot plan for a regional restoration planning program for Louisiana that will provide a means to efficiently restore habitat and other natural resources injured as a result of small spills.

Pre-assessment data collection for NRDA was begun for spills that occurred during 2003-2004. These were:

- November 2003 Exxon/Mobile pipeline spill north of Grand Isle in Barataria Bay.
- February 2003 tanker collision in the Mississippi River near Destrahan.
- February 2003 drilling mud release by Burlington in the Four Island Dome area below Houma.
- March 2003 condensate gas blow-out in Lafitte, at the Alpine facility, onto adjacent marsh
- April 2003 two spills that occurred west of the Mississippi River Delta, near Port Sulphur.
- June 2003 the Bastion Bay/Hillcorp spill.

The department continued monitoring and damage assessment activities for spills, including:

- Restoration planning with Shell/Texaco on a Dec/Jan 2003 pipeline blowout in Terrebonne Bay, south of Cocadrie, LA to discuss restoration projects.
- Damage assessment on a March 2003, an Exxon/Mobile oil spill in Lake Washington, out of Port Sulphur, LA.
- Determining damage estimates for the April 2002 BP/Amoco pipeline spill in Little Lake in the Barataria Basin near Galliano, LA.
- Cooperative damage assessment for the May 2002 Forrest Oil pipeline spill in the East Lake Palourde Field near Franklin, LA.
- Cooperative damage assessment for the September 2002 Ocean Energy well blowout at North Pass of the Mississippi River near Delta National Wildlife Refuge and Pass-a-Loutre State Wildlife Management Area is complete and restoration planning is in the works.
- Site visits for damage assessment determinations of the December 2002 Hilcorp pipeline spill at Duck Lake in the Atchafalaya basin.
- Restoration planning for an April 2001 Williams Petroleum pipeline spill at Mosquito Bay near Pointe au Fer.
- Restoration was accomplished for the November 2000 T/V Westchester tanker spill in the Mississippi River. The focus of restoration for this spill was the area on and around Pass-a-Loutre State Wildlife Management Area where a delta splay project was constructed to compensate for marsh and other habitat injuries. Improvements were also made to campground facilities on the WMA. Monitoring continues.
- A marsh creation project near the site of a September 1998 Equinox well blowout in Lake Grand Ecaille, Plaquemines Parish has been selected for implementation pending insurance claims issues resulting from bankruptcy of the responsible party and completion of a consent decree.
- The habitat restoration/enhancement project for the May 1997 Texaco Pipeline spill in Lake Barre, Terrebonne

Parish, was implemented during 2000. The final monitoring report was submitted and the cost packages were requested for completion of the case.

- Restoration planning activities for a June 1997 Apache Corporation pipeline spill in coastal Vermilion Parish continued in 2002.
- LDWF staff continued to work with other state and federal trustees to determine the extent of natural resource injuries resulting from the spill and develop suitable restoration alternatives for a Sonat well blowout in August 1997.

The department also participated in an interagency project initiated by the Louisiana Oil Spill Coordinator's Office to develop regional plans to restore natural resources injured in oil spills.

These regional restoration plans were presented for public comment in early 2003 and the regional Environmental Impact Statement associated with these plans went through a number of edits in 2003.

In addition the department is participating with other state and federal agencies in planning restoration of hazardous materials sites. Two planning activities are underway: Bayou Trepagnier in St. Charles Parish, and Calcasieu River in Calcasieu Parish.

The department also evaluated and responded as needed to approximately 3000 oil spill notifications which were received from State Police. These notifications cover a range of hazardous emissions and chemical spills as well as oil spill related incidents.

Seismic Section

The LDWF Seismic Section was created in 1939 specifically to protect oysters, fish, shrimp, and other wildlife from the effects of seismic exploration. Seismic exploration utilizes energy waves to generate a below-ground "picture" of oil and gas deposits. The energy waves can be produced by explosives detonated below the ground (generally 100 - 150 feet deep), by air guns that emit a powerful burst of air just above the surface, or by large vibrating pads placed on the surface. Because powerful energy waves are used in seismic exploration, detrimental effects to wildlife and fisheries resources could occur. Seismic agents monitor geophysical companies to protect Louisiana's fish and wildlife resources by ensuring compliance with LDWF seismic rules and regulations. During fiscal year 2003-2004, the seismic section monitored 15 projects throughout the state.

Coastal Wetlands

In 2003-2004, the Marine Fisheries Division continued to work with state and federal agencies to develop strategies for slowing the rate of coastal wetlands loss in Louisiana.

Extensive fisheries resource monitoring programs continued for both the Caernarvon and Davis Pond Freshwater Diversion Projects. The Caernarvon Project has been operational for 13 years and department personnel have monitored its effects on the fish, wildlife and vegetation populations in the basin throughout its operation. The Davis Pond Project came on line on in July 2002. Ongoing maintenance designed to address problems with flooding in the ponding area north of Lake Cataouatche limited

the amount of freshwater diverted through the structure. Marine Fisheries personnel continued to monitor the fisheries resources in the Barataria Basin including a comprehensive study of the Davis Pond project effects on recreational fishing throughout the basin. The Marine Fisheries Division provides input into the operation of both structures and also participates in the planning and development of future coastal restoration projects and large public works that affect marine fisheries.

INLAND FISHERIES

The Inland Fisheries Division manages fish populations and habitats for the conservation and improvement of sport and commercial fishing primarily in the freshwater areas of the state. Fish populations are managed through surveys, fish sampling, fisheries regulations, fish stocking and the modification of fisheries habitat. In addition, the division is charged with the control of nuisance aquatic vegetation in public water bodies. This is accomplished through an aggressive aquatic plant control program that utilizes a variety of management options including herbicides, drawdowns and biological controls. The division is also leading the charge with respect to invasive species. A recently passed executive order created a task force under Wildlife and Fisheries to create a management plan to deal with nuisance invasive species.

FISHERIES MANAGEMENT

Lake Management

Fisheries managers estimate relative abundance, size, class structure, and species composition of fish population and physiochemical characteristics of the water in 63 lakes and streams annually. All lakes are sampled in a similar manner so that data can be compared. Sampling techniques include:



Electro fishing samples are taken in the spring and fall to provide a measure of abundance. Only largemouth bass are collected in the spring while largemouth bass and crappie are collected in the fall. A forage sample of all species is also collected in the fall. Standard sampling time is 900 seconds per station.



Gill net samples are taken during winter primarily to determine relative abundance and length frequencies of gizzard shad, striped bass, hybrid striped bass, commercial and rough fish species. Monofilament nets with meshes from 2.5 to 4.0 inches (bar mesh) are set at dusk and gathered at sunrise. Each fish taken is identified, weighed and measured. This sampling method provides gear selectivity, species composition, and length frequency information.

Nighttime shoreline seine sampling measures reproductive success of the sunfishes including bass and bluegill. Year-class strength, species composition and prey availability are provided by this sampling effort. Samples are conducted during spring and summer and consist of one quadrant haul at each sample site using a 25-foot by six-foot seine.



Frame nets are used to measure relative abundance and length-frequencies of crappie and other sunfish. Species composition, age and growth and length weight relationships are determined. Sampling is conducted for a minimum of 48 hours with two nets at each station.

Water quality samples are taken at all sampling stations. Water temperature, pH, dissolved oxygen concentration, conductivity, oxidation/reduction potential and water body depth are measured.

Creel samples were conducted on three water bodies. This sampling method puts the fisheries manager in direct contact with the fishermen. Information collected includes species sought and species caught, distance traveled, time fished, number caught and released, and a measurement of all fish harvested.

The Inland Fisheries Division also monitors other fish species including paddlefish, and sturgeon. The division continues to collect data on relative abundance, habitat requirements, movements and population estimates. Paddlefish were again artificially propagated and 114,000 were stocked in Louisiana waters. All paddlefish fingerlings stocked were implanted with coded wire tags before release. Tagging, age and growth and population characteristics of pallid and shovelnose sturgeon will continue to be collected in 2005. The division also successfully spawned and stocked 12,000 pallid sturgeon this year. Again each fish was individually tagged prior to release.

A project in cooperation with the U.S. Fish and Wildlife Service has begun to implant sonic tracking transmitters in Gulf stur-



geon and follow their movements. A total of 42 fish have been tagged in the upper Pearl River system since the spring of 2000-2001 and tracked to their winter holding grounds in the Pontchartrain basin and Mississippi Sound area.



Technical advice to owners of ponds and small lakes is also part of the responsibility of the division. During the past year, division biologists made over 230 site visits assisting residents of the state on problems ranging from construction and stocking requirements to harvest and disease identification. The biologists also answered over 1,962 phone inquire about various pond-related problems.

The division continues its Freshwater Artificial Reef Program. With many of our Louisiana impoundments losing natural complex habitat as a symptom of aging, the department is now in the process of developing guidelines for the construction of freshwater artificial reefs, with the use of various materials. The preliminary findings indicate that material and methods used do attract and provide necessary cover for all sizes of sport fish and have no negative environmental consequences.

A total of six lakes were designated as candidates for placement of artificial reefs; Toledo Bend, Claiborne, Caney, D'Arbonne, Rodemacher and Bruin. Each reef was constructed, marked with buoys and placed in varying depths. Maps of reef locations with coordinates were made available to anglers.

Louisiana
Cooperative Fish



Disease is a project that the division has with the L.S.U. Aquatic Animal Diagnostic Lab within the School of Veterinary Medicine, which provides support to private pond owners. Last year 280 cases were submitted as part of this project.

The division is also a member of the Southeastern States Cooperative Fish Disease and Parasite Project conducted and centered at Auburn University. This project involves the clearance of chemicals for treatment usages, and research in fish disease identification, new diagnostic and treatment methods, and vaccine development.

The division is also responsible for conducting investigations into fish kills in freshwater. Area impacted and losses are recorded for each kill. Six major fish kills and dozens of minor incidents were investigated this year. Naturally-occurring dissolved oxygen depletion was indicated as the cause of most kills, and one disease outbreak occurred. Continued investigations into the Largemouth Bass Virus problem were conducted. DWF personnel assisted in administering a grant to LSU to develop non-lethal methods for detection of this disease.

Aquatic Plant Research and Control Program

During fiscal year 2003-2004, the Aquatic Plant Research and Control Program (APRCP) provided substantial benefits to the citizens of Louisiana. Responsibilities included monitoring water bodies for non-native, invasive aquatic vegetation, providing technical assistance, and continuous investigation into more effective and environmentally safe methods of controlling these nuisance plants. Aggressive treatment of affected waters continued in an effort to restore and improve the aquatic habitat and the natural desirable balance of plants and fish. Control of nuisance plant species is also necessary to provide boating access to many public waterways.

Sixteen lakes were type-mapped to determine and evaluate the status of aquatic weeds, primarily submersed. Species composition and density were determined on 12 lakes. The results from these investigations were used in formulating management plans on which decisions of water body habitat alteration are based.

Biologists continued to provide advice and technical assistance to private and municipal pond owners concerning aquatic vegetation management problems. This popular extension program also provided aquatic plant identification assistance for the public on request.

Research projects of the APRCP included evaluation of new herbicides to determine their effectiveness for use in aquatic weed control.

The department utilizes both conservation and federal funds to control, primarily, water hyacinth (*Eichhornia crassipes*). However, in the course of treating water hyacinth with the herbicides 2,4-D and glyphosate; emergent plants, such as alligator-weed (*Alternanthera philoxeroides*), primrose (*Ludwigia* spp.), American lotus (*Nelumbo lutea*) and several others of minor importance were also sprayed. Other troublesome submersed and floating plants not susceptible to control with 2,4-D and glyphosate, such as hydrilla (*Hydrilla verticillata*) and two

species of salvinia (*Salvinia minima* and *S. molesta*) require more expensive herbicides. State funds in the Aquatic Plant Control Fund (APCF) were used to purchase herbicides to address infestations of these plants. Crews utilizing outboard powered boats, airboats, mudboats and roadside spray units effectively applied herbicide to 41,000 acres of infested waters. Another 510 acres were treated by helicopter for a total of 41,510 acres.

In addition, 15 percent of the APCF is also used to fund research into aquatic plant control by the Louisiana State University Agriculture Center. LSU continued its research into biological control of salvinia using the salvinia weevil, *Cyrtobagous salviniae*. Research efforts are currently focused on rearing sufficient numbers of the weevil to release on infestations of salvinia. Test releases have been made on common salvinia in selected areas of southeast Louisiana and on a persistent infestation of giant salvinia in the Houma area.

Biological control of giant salvinia using the salvinia weevil, *Cyrtobagous salviniae*, is recognized as the leading and most often used giant salvinia-control strategy in all areas of the world due to its highly effective nature. Over 1 million salvinia weevils have been mass produced by the U. S. Department of Agriculture (USDA) in the last two years and released into giant salvinia-infested waterways in Texas and Louisiana.

The project began with the technology transfer phase. In a collaborative effort the USDA and LA Department of Wildlife and Fisheries began four releases of about 330,000 salvinia weevils into three field insectary sites (FIS) near Houma, LA during April 2003. Bi-monthly monitoring of the LA sites indicated that the weevils established and quickly dispersed at all release sites. Populations are doing well at all three sites and is believed to be even higher further from where samples are collected.

Weevil and plant populations will continue to be monitored in order to document the efficacy and distribution of the weevil in Houma, LA.

Fish Stocking

The goals and objectives of the Inland Fisheries Division include providing the public with a quality fishing experience and managing for big bass. In part the management for big bass is reliant upon the stocking or incorporating of the Florida largemouth bass gene into our native black bass environment. In 2003-2004 departmental Inland Fish Hatcheries provided fingerlings as an integral part of our fisheries management program for 85 diversified water bodies encompassing over 1,000,000 acres throughout the state of Louisiana.

The following is an alphabetical listing of the water bodies stocked in fiscal year 2003-2004:

Amite River, Anacoco Lake, Atchafalaya Basin, Atchafalaya River, Bayou Macon Cutoff 1,2,3, Big Alabama Bayou, Big Mar, Black Bayou (Bossier), Black Bayou Lake (Caddo), Black Lake (Natchitoches), Black River Lake, Blind River, Bonnie Carre Splw., Brec Pond, Buhlow Lake, Bundick Lake, Caddo Lake, Cane River Lake, Caney Lake (Webster), Cataouatche

Lake, Cheniere Brake, Chicot Lake, City Park Lake (Baton Rouge), City Park Lake (New Orleans), Claiborne Lake, Cocodrie Lake, Concordia Lake, Concordia Parish Community Center, Cotile Lake, Crooked Creek Lake, Cross Lake, Cypress Lake, D'Arbonne Lake, Dept Of Ag Ponds, Des Allemands, False River, Grambling Lake, Grassy Lake, Hardwater Lake, Henderson Lake, John K. Kelly, Kepler Lake, Kincaid Lake, Kiroli Park Lake, Kisatchie Forest Lakes, Lacassine Nat'l Wildlife Refuge, Lafourche Lake, Lafreineire Lake, Lake Bruin, Lake Fausse Point, Lake Louis, Lake Ophelia, Lake Providence, Lake St. John, Lake Verret, Lower Sunk Lake (Dist.4), Mermentau River, Mill Creek Lake, Moore Lake, Nantachie Lake, Poverty Point Lake, Red River – Pools 1, 2, 3, 4, & 5, Red River (WMA)-Barrow Pit, Rockefeller Refuge, Rodemacher Lake (Cleco), Ruston Park Lake, Spanish Lake, St. John Bayou, Tangipahoa River, Tchefuncte River, Tickfaw River, Natalbany River, Toledo Bend, Twin Lake, Veteran's Park, University Lake, Vernon Lake and Wallace Lake.

SUMMARY OF FISH STOCKED FISCAL YEAR 2003-2004

Florida Largemouth Bass:	4,192,240
Striped Bass	486,368
Hybrid Striped Bass:	243,039
Channel Catfish:	184,090
Bluegill	1,217,800
<u>Paddlefish:</u>	<u>26,316</u>
Total	6,349,853

Public Boating and Fishing Access

In a cooperative effort, the department assists local government entities requesting financial assistance in the development and construction of boating and fishing access facilities. To accomplish this, the department obligates federal Sport Fish Restoration funds to match up to 75 percent of the total cost of these projects. This program funds both fresh and saltwater projects which may include construction of boat ramps, parking areas, docks, bulk heading and fishing piers. A total of 66 projects are completed to date, and another 19 are in various stages of either planning or construction.

Public Access Facilities for Boating and Fishing under Construction or in the Planning Stage
 Intercoastals City Boat Launch and Parking
 Cheniere Lake Boat Lane Marking
 Plaquemine Waterfront Floating Fishing Docks
 D'Arbonne Lake Boat Lane Marking & Stump Removal
 Reserve Boat Launch, Phase II
 Reserve Boat Launch, Phase III
 Fort Pike Boat Launch
 Belle Chase Boat Launch
 Mandeville Fishing Pier
 Golden Meadow Public Boat Launch
 Sherburn WMA Boat Launch
 Burns Point Park Boat Launch
 Ashland Boat Launch
 Lockport Boat Launch
 Calcasieu/Industrial Canal Fishing Pier
 Lake End Park, Phase II
 Jessie Fontenot Boat Launch, Phase III

South Houma Fire Station Boat Launch
Texas Gulf Road Boat Launch

Projects Completed During Fiscal Year 2003-2004

Main Street Boat Launch
Berwick Boat Launch, Phase II
North Bend Boat Launch
South Shore Harbor Improvements
Mandeville Fishing Pier

Permits

Inland Fish Division issues a variety of permits to provide individuals a legal method to participate in a specific activity. A list of these permits, a short explanation for each, and the number issued last year appear below.

Freshwater Scientific Collecting Permit

To take fish for scientific or educational purposes, propagation or for distribution. Issued - 76

Triploid Grass Carp Permit

To allow individuals to possess triploid grass carp. Issued - 223

Triploid Grass Carp Sellers Permit

To all individuals to import, transport, possess and sell triploid grass carp. Issued - 8

Tilapia Permit

To allow individuals to possess tilapia. Issued - 11

Experimental Freshwater Shrimp Permit

To allow individuals to commercially fish for freshwater shrimp while using a specific net. Issued - 2

Gamefish Fingerling Permit

To allow individuals to transport, possess and sell game fish fingerlings. Issued - 26

Mussel Harvester's Permit

To allow individuals to commercially harvest freshwater mussels. Issued - 0

Mussel Buyers Permit

To allow individuals to buy commercially harvested mussels from mussel harvesters. Issued - 0

Scuba Spearfishing Permit

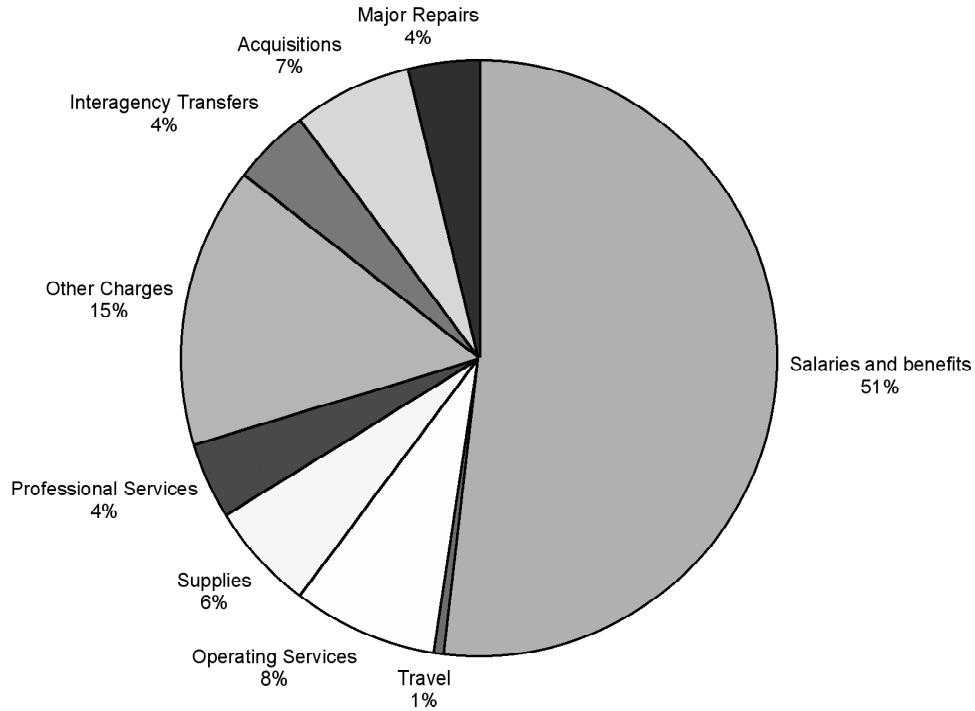
To allow individuals to spearfish in Toledo Bend Reservoir June through September. Issued - 2

APPENDIX

Fiscal Year 2003-2004 LDWF Expenditures by Category (type)

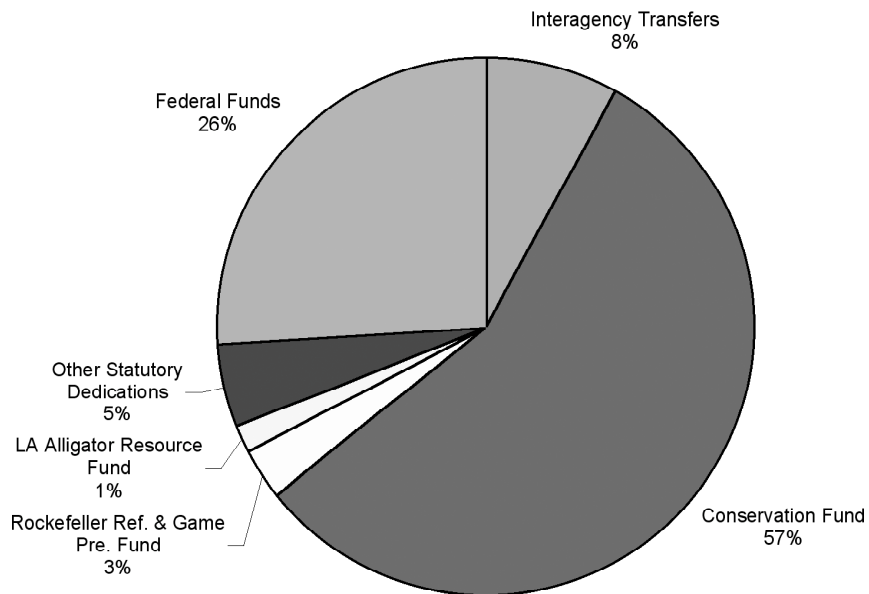
Total Expenditures = \$76,219,479

Total Authorized Positions = 792



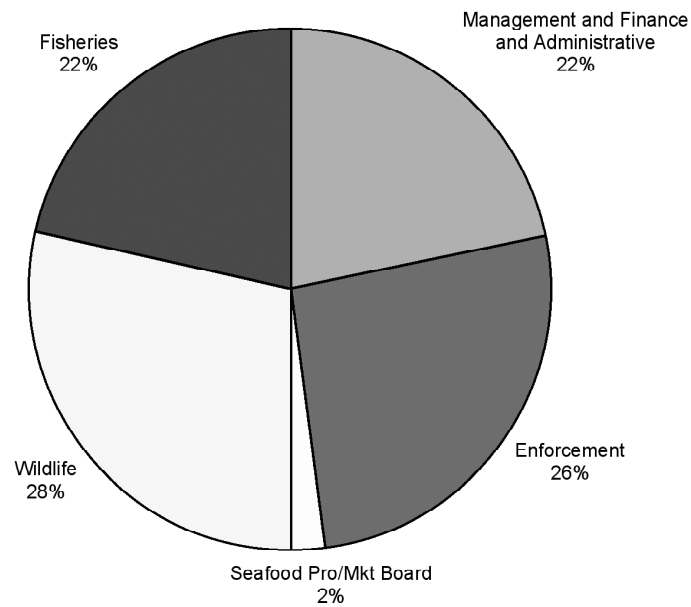
How 2003-2004 Expenditures Were Funded (Means of Financing)

Total Means of Financing = \$76,219,479

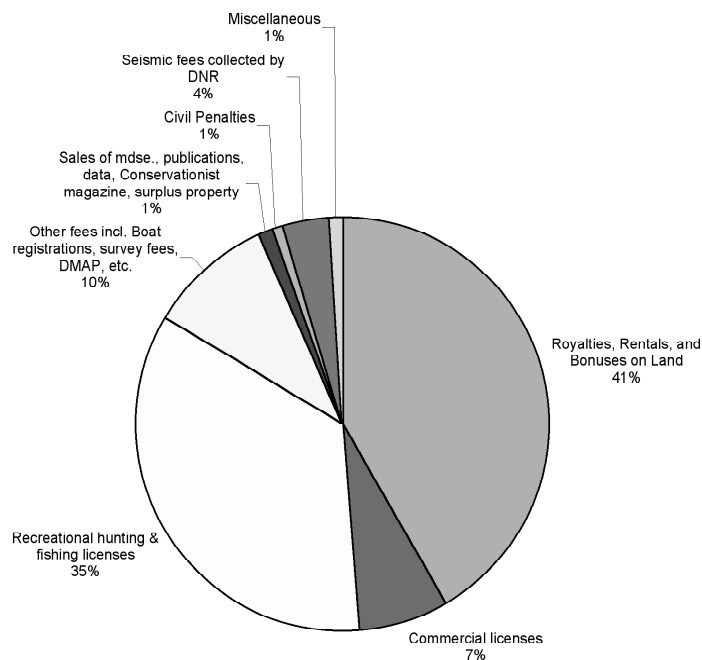


APPENDIX

Fiscal Year 2003-2004 Department Expenditures by Appropriated Program *Total Expenditures = \$76,219,479*

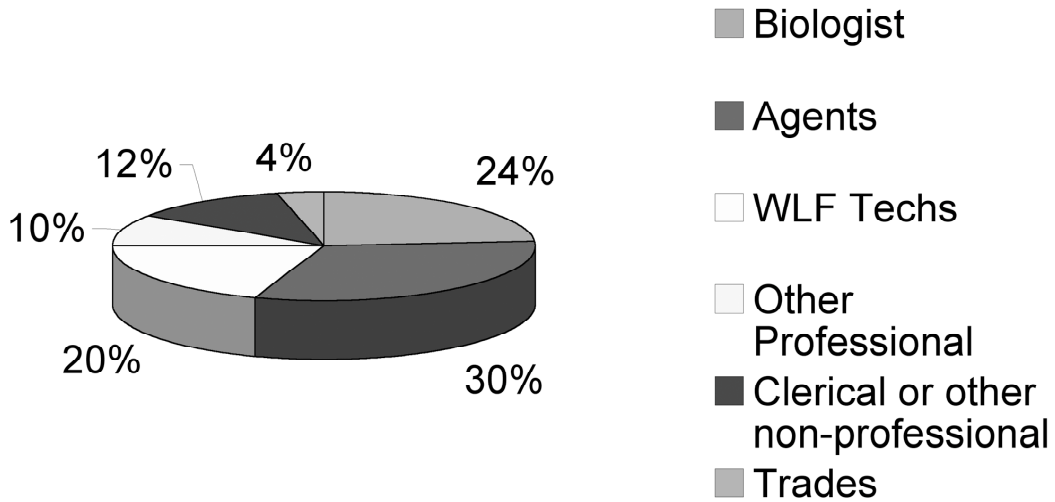


Sources of Revenue to the Conservation Fund Fiscal Year 2003-2004 *Total Revenue = \$47,764,025*



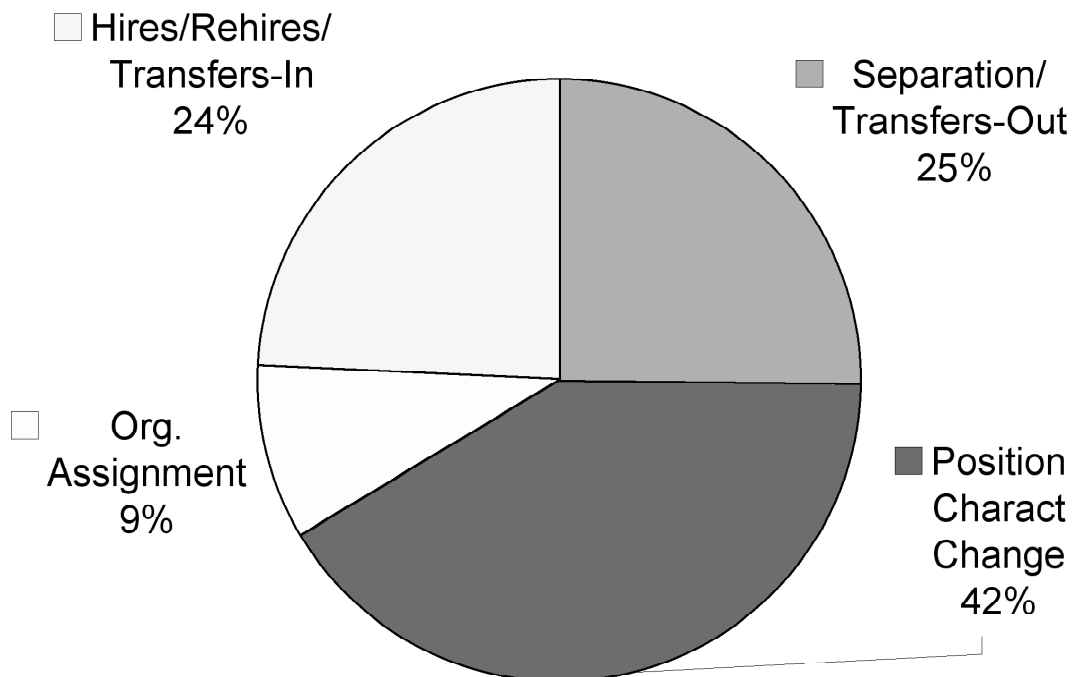
APPENDIX

Workforce Breakdown by Classified and Regular Unclassified Job Title



Breakdown of Employees Actions

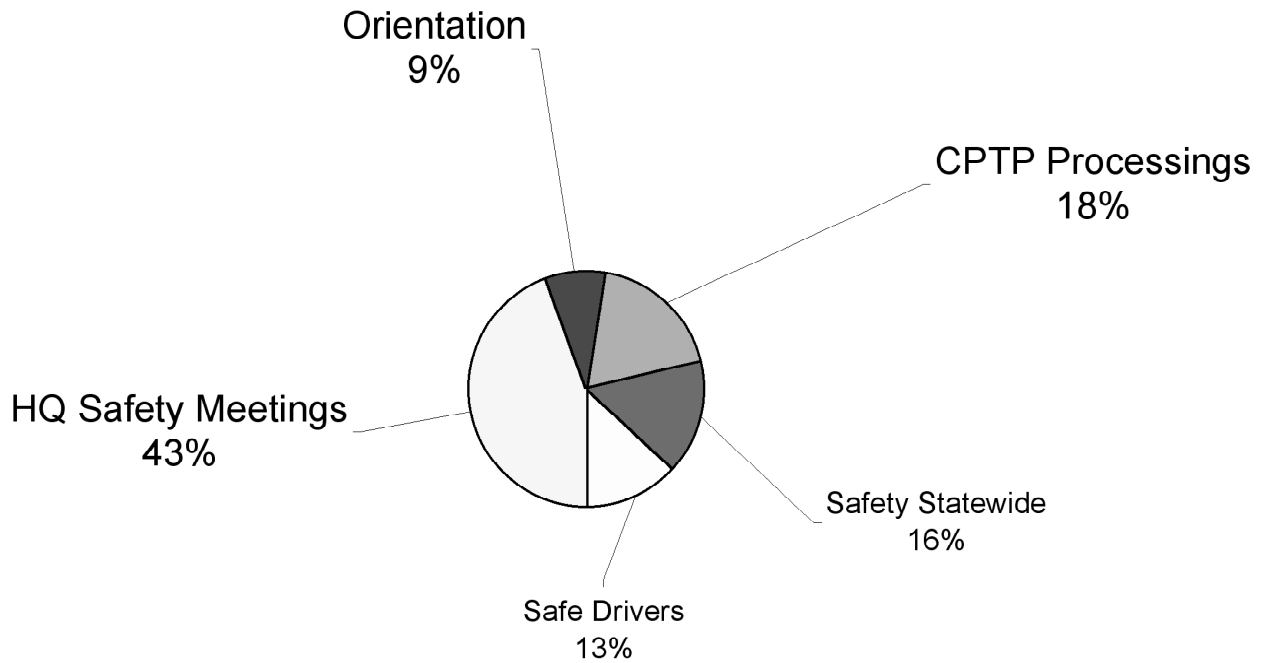
Total Number of Employee Actions: 495



APPENDIX

**LDWF Training and Staff Development
Fiscal Year 2003-2004**

Total Numbers of Employees Trained: 1,452



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